Medical TIMES

THE JOURNAL OF GENERAL PRACTICE

The Patient with Advanced Cancer

Spondylosis

Early Management of Stroke

Cerebral Arteriosclerosis

Contact Dermatitis

Education for Childbirth

Investing

Pennies at a Discount

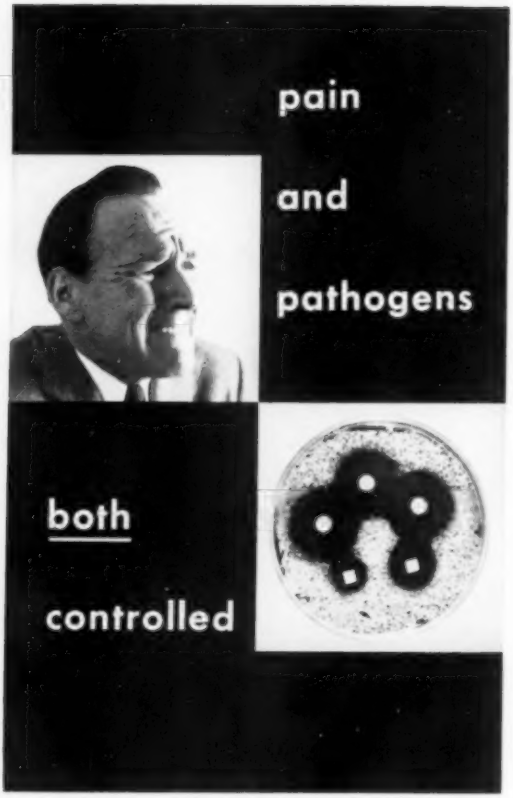
Value Up, Market Down

Dollar Averaging

THE MEN WHO MADE THE MEDICINE

. . . second of an historical series on the founders of the pharmaceutical industry—see page 547

VOL. 94 APRIL 1966 NO. 4



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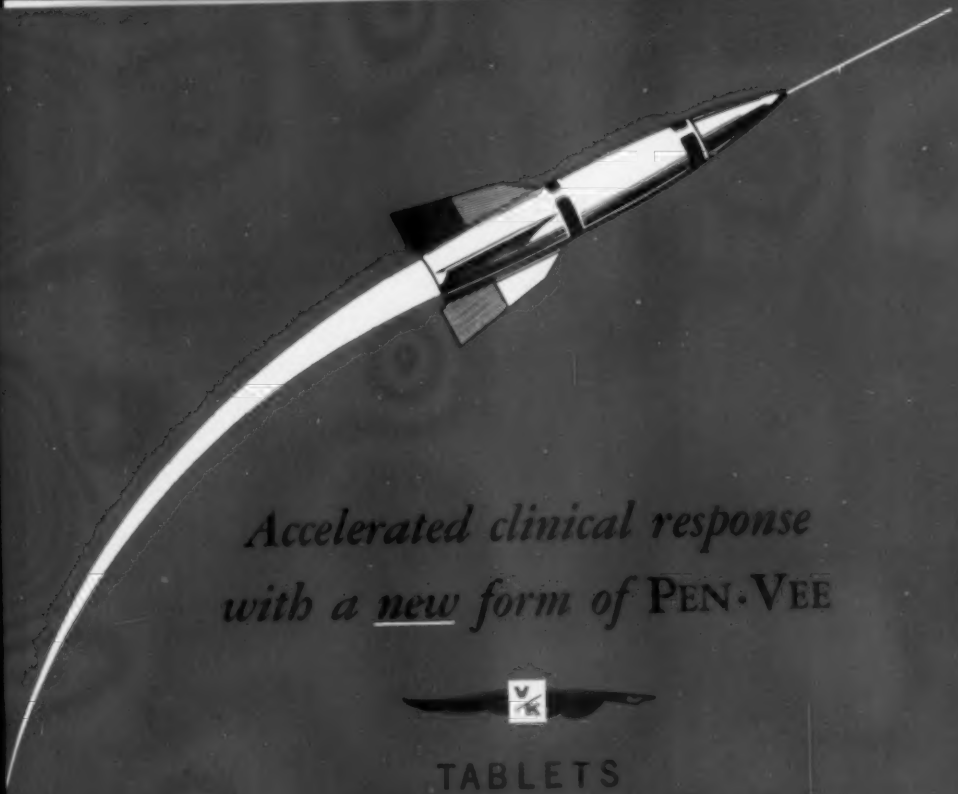
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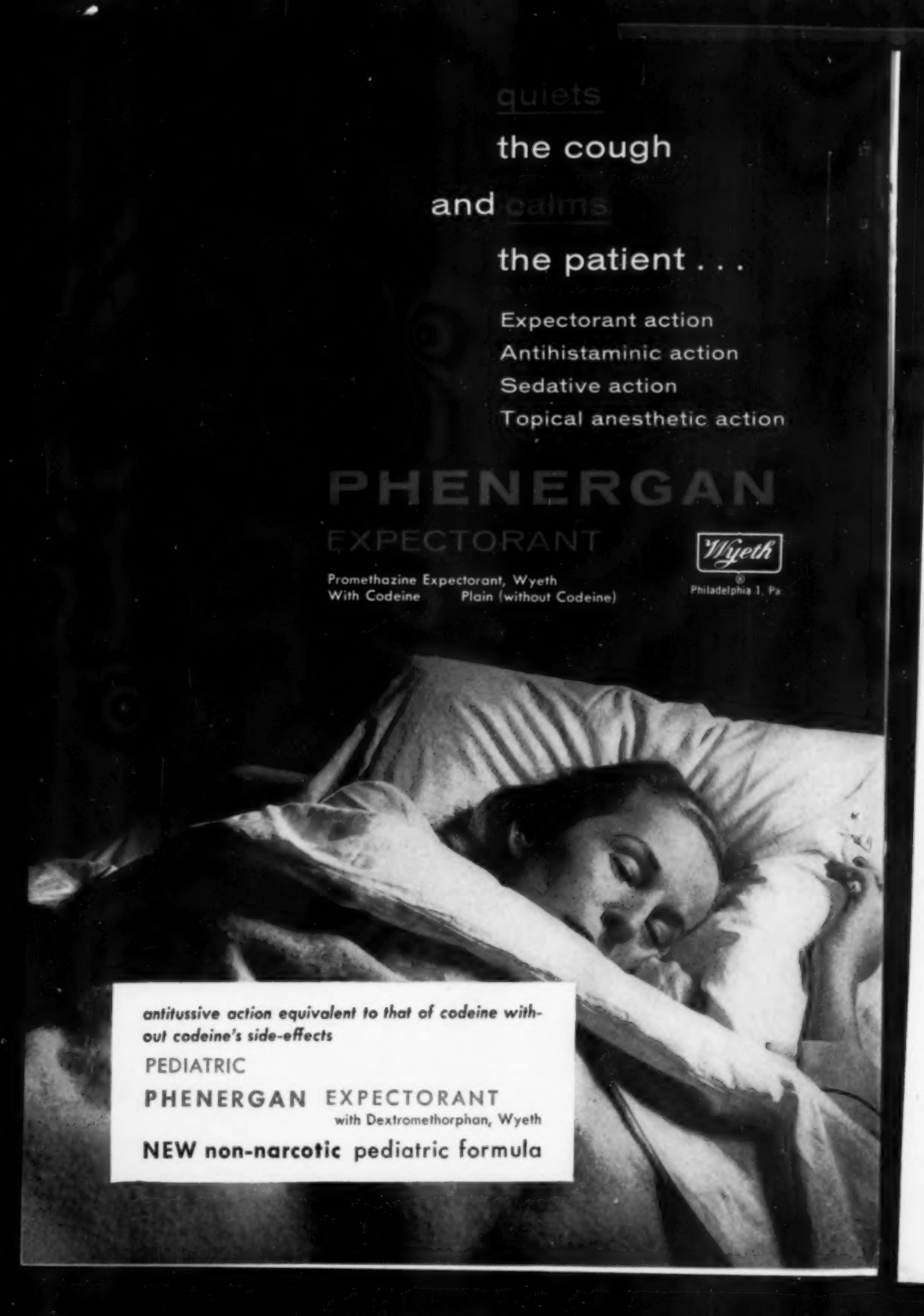
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the cough
and calms
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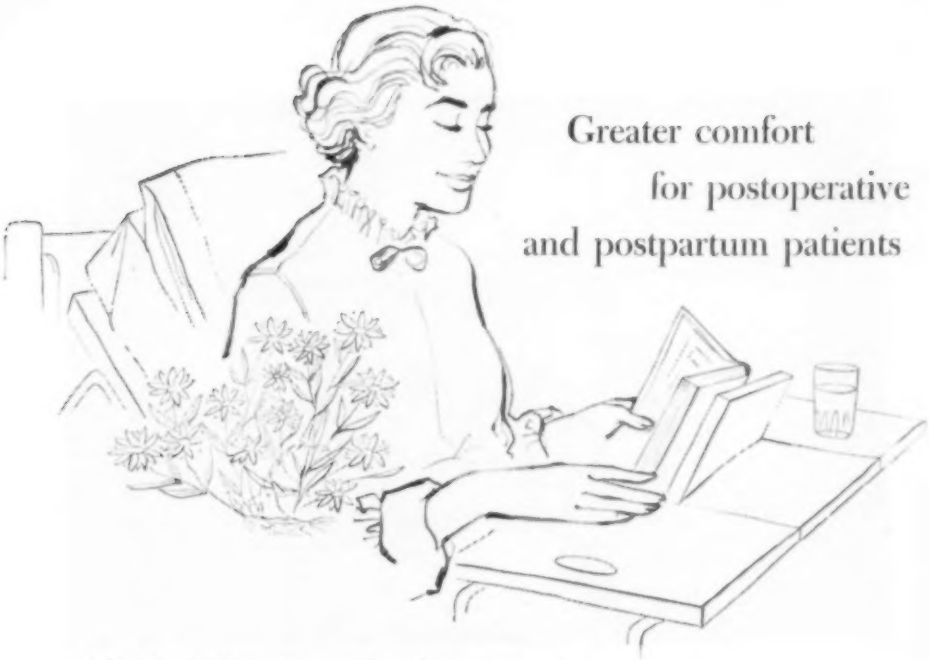
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Greater comfort for postoperative and postpartum patients

abdominal distention and urinary retention
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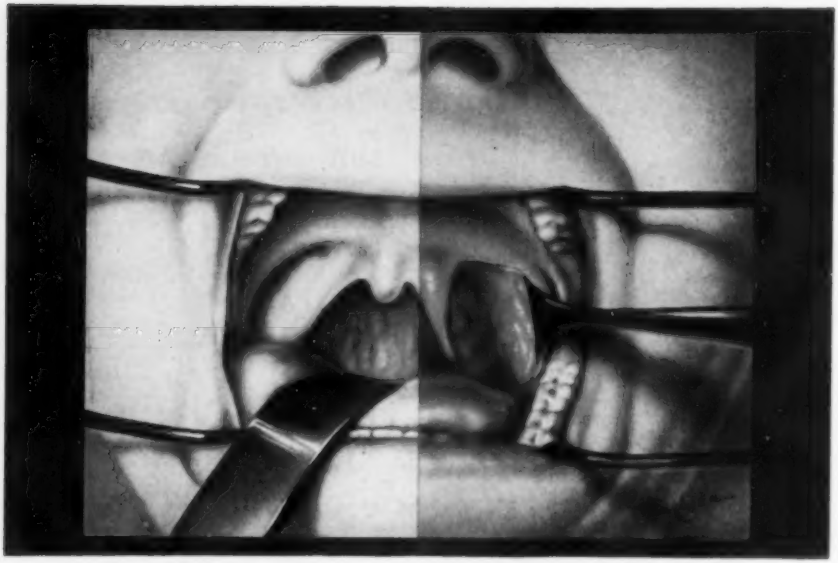
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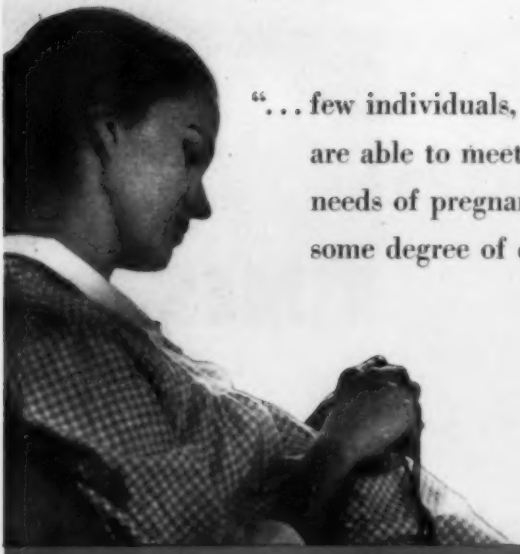
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Reference: 1. Tompkins, W. T. in Wohl, M. G. and Goodhart, R. S.: *Modern Nutrition in Health and Disease*, Lea & Febiger, Philadelphia, 1955, p. 886.

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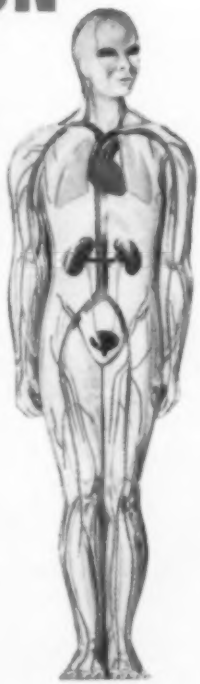
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as 1-2-3
in

HYPERTENSION



1 INITIATE 'DIURIL' THERAPY

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The dosage of other antihypertensive medication (reserpine, hydralazine, etc.) is adjusted as indicated by patient response. If the patient is established on a ganglionic blocking agent (e.g., 'INVERSINE') this should be continued, but the total daily dose should be *immediately* reduced by 25 to 50 per cent. This will reduce the serious side effects often observed with ganglionic blockade.

3 ADJUST DOSAGE OF ALL MEDICATION

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BENEFITS:

- improves and simplifies the management of hypertension
- markedly enhances the effects of antihypertensive agents
- reduces dosage requirements for other antihypertensive agents—often below the level of distressing side effects
- smooths out blood pressure fluctuations

INDICATIONS: management of hypertension

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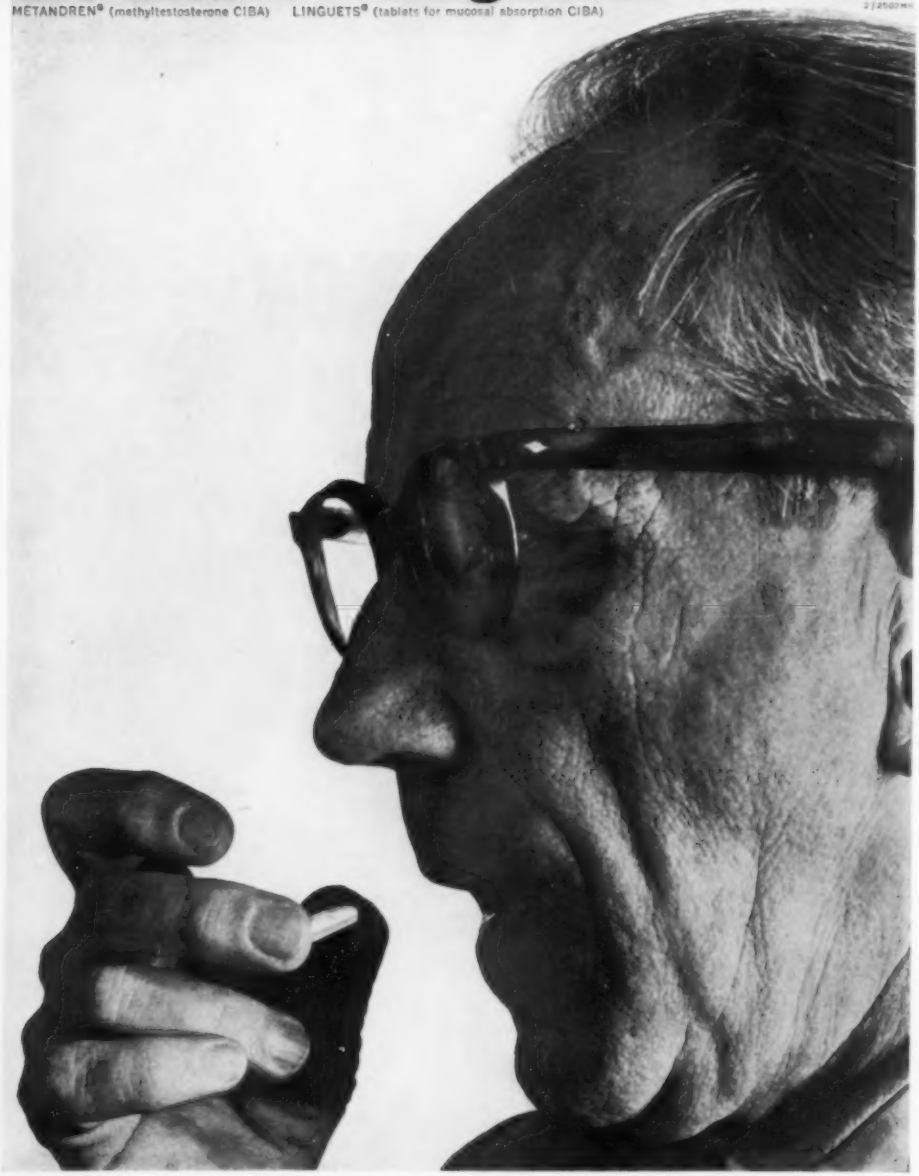
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2/2500M

METANDREN® (methyltestosterone CIBA) LINGUETS® (tablets for mucosal absorption CIBA)





Off the Record . . .

True Stories From Our Readers

Each incident described has been contributed by one of our readers. Contributions describing actual and unusual happenings in your practice are welcome. For obvious reasons only your initials will be published. An imported German apothecary jar will be sent in appreciation for each accepted contribution.

Born on the Hoof

Then there was the little thing that had a new baby every year for quite some time. Until one day, pondering her poor general condition, I remarked that this old stuff would have to cease until she could be built up and made to gain some badly needed weight. We laid out a program to accomplish this end, gave her a diet, vitamin pills and reassurance. Time passed and, about a year later, we met in the supermarket. But what a change had occurred! Now she was as heavy and flabby as she had been thin. I asked her what in the world she had been doing. "I'm afraid to tell you," she said, blushing. "You know me," I said, "go on tell me." "Well, she said, "those pills you gave me didn't help so my husband made me take the vitamin supplement he feeds the pigs. And boy, did that work."

W.F.G., M.D.
Atlantic, Iowa

Only a Rose

While waiting for an OB patient to deliver—during the second stage of labor when the head was crowning, the nurses and I were talking to the patient about the baby's head showing and the color of the baby's hair. A nurse commented that it looked like the baby was going to have red hair.

The patient exclaimed "Oh No!" It can't have red hair—the milkman has red hair."

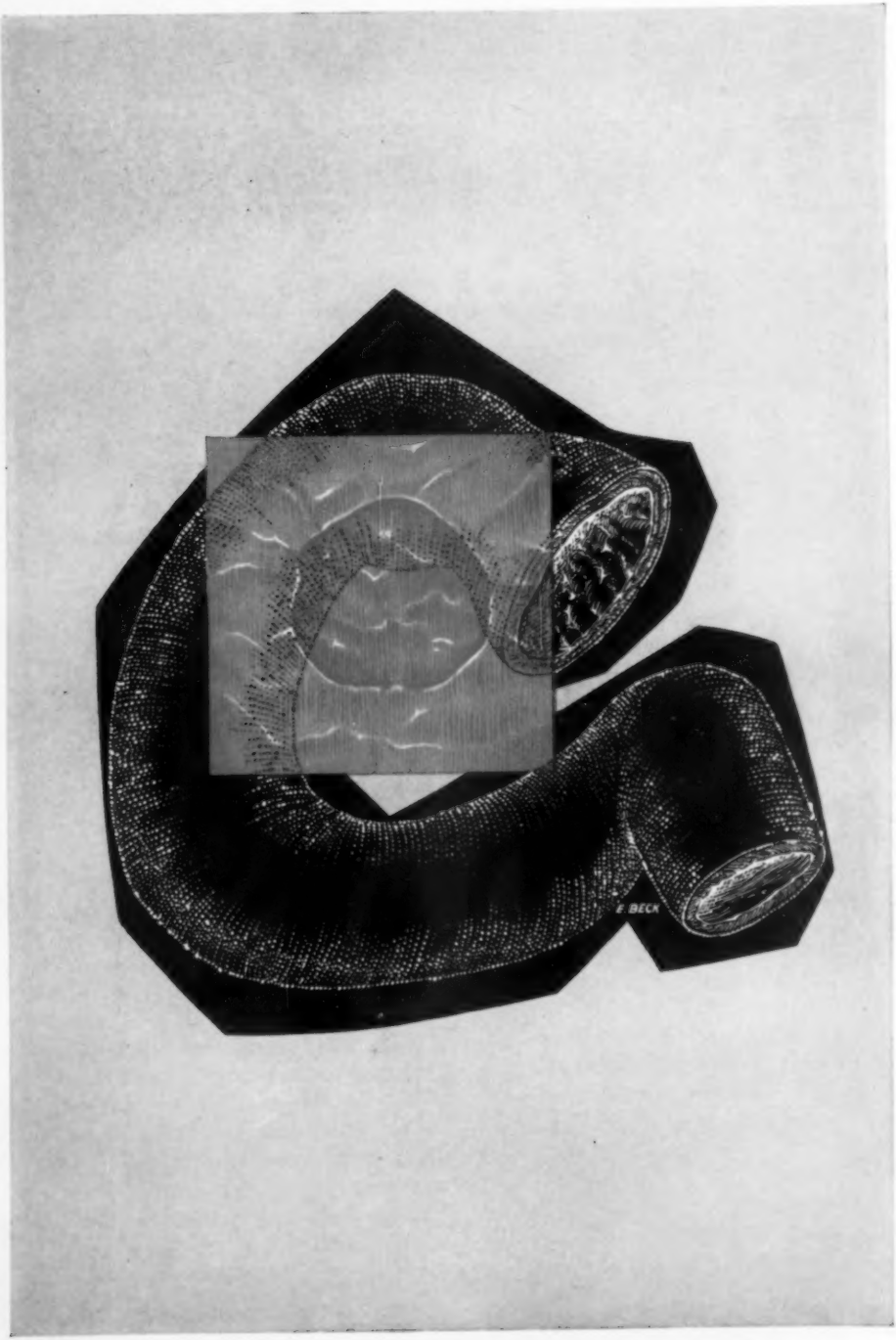
G.A.K., M.D.
Des Moines, Iowa

Wrong End

A habit of the busy G.P. on house calls often compresses history-taking into high-pressure staccato anticipatory questions. Such was the case one late call:

Asking about the neck while examining the ears, about the chest when examining the throat, about the GI tract while examining the chest—etc.—I was sleepy and tired—asking questions about the GI while examining the chest, stethoscope in ears—a burst of family laughter followed one question—I removed the stethoscope to inquire

—Concluded on page 25a



RELIEVES THE GNAWING ACHE

Pro-Banthine® provides rapid control of pain in peptic ulcer

In a two-year study[1] by Lichstein and co-workers, documented by intensive personal observation and by follow-up studies, Pro-Banthine (brand of propantheline bromide) often brought immediate relief of ulcer pain. Patients (11 per cent) who did not respond satisfactorily to Pro-Banthine therapy had "anxiety manifestations of psychoneurotic proportions."

In addition to frequent immediate symptomatic relief, Pro-Banthine reduces gastrointestinal motility and diminishes the secretion and acidity of gastric juice, all-important factors in the generation and aggravation of peptic ulcer.

These actions of Pro-Banthine and its demonstrated effectiveness in accelerating ulcer healing[2-5] mark the drug as a most valuable adjunct in the treatment of peptic ulcer.

The suggested initial dosage is one 15-mg. tablet with meals and two tablets at bedtime. An increased dosage may be necessary for severe manifestations and then two or more tablets four times a day may be prescribed.

G. D. Searle & Co., Chicago 80, Illinois. Research in the Service of Medicine.

---

1. Lichstein, J.; Morehouse, M. G., and Osmon, K. L.: Am. J. M. Sc. *232*:156 (Aug.) 1956.
2. Sun, D. C. H., and Shay, H.: Arch. Int. Med. *97*:442 (April) 1956.
3. Rafsky, H. A.; Fein, H. D.; Breslaw, L., and Rafsky, J. C.: Gastroenterology *27*:21 (July) 1954.
4. Schwartz, I. R.; Lehman, E.; Ostrove, R., and Seibel, J. M.: Gastroenterology *25*:416 (Nov.) 1953.
5. Silver, H. M.; Pucci, H., and Almy, T. P.: New England J. Med. *252*:520 (March 31) 1955.

SEARLE



New yellow tinted AEROPLAST* PROVIDES ADDED BENEFITS IN PATIENT CARE

In clinical use as a primary surgical dressing, as a secondary dressing after removal of initial gauze-tape, or as a skin protectant to prevent or clear excoriation—Aeroplast surgical dressing demonstrates* unique advantages:

CHOICE OF SIZES

12 oz. tinted
for frequent operating room use

3 oz. tinted
convenient for surgical carts and for office use

6 oz. clear
the original Aeroplast still available

Rx no longer needed

- **easy, rapid spray-on technic**
- **conforms to problem wound contours without tape or bulk**
- **plastic film forms waterproof bacterial barrier; antibacterial; dependably sterile dressings**
- **protects incision and adjacent area from drainage, urine, feces and other outside contamination**
- **permits visual inspection without removing dressing; allows free access for palpation and auscultation; no undesired restriction of respiration or circulation**
- **increases patient comfort; no bulk, no tape; non-sensitizing, non-allergenic**

16 MM COLOR-SOUND FILM now available for professional meetings . . . to schedule write:

Aeroplast **CORPORATION**
420 Dellrose Avenue, Dayton 3, Ohio

*Reports of clinical use sent on request

®AEROPLAST—U. S. PAT. NO. 2,804,079

—Concluded from page 21a

"what's so funny"—and was told, "Doctor, you asked Mamma, 'Now take a deep, de-ep breath, with your bowels open'."

T.T.J., M.D.
Durham, North Carolina

Delayed Action

Several days ago, the telephone rang at about 11 P.M. and my sleepy wife answered. It was Mrs. J. and she wanted to speak with me. When my wife informed her that I was at a medical meeting, she was obviously miffed, and, said she couldn't understand why she always seemed to miss me. My wife, remembering that when Mrs. J. called last, it was also fairly close to midnight, asked her what was wrong, because she was under stern orders that I was not to be paged unless it was a matter of extreme importance. "Well," said Mrs. J. she "wanted to discuss a problem" with me. Her baby son was having about four bowel movements daily and she thought that was too much. She thought that I might prescribe something over the phone. When my wife (becoming more and more irritated) asked her how long this had been going on, the startling answer was "oh, since he was born." Too annoyed to say anything sensible, my wife asked her to please call the next day during office hours. When I got home that night, or rather, after midnight, my wife sleepily told me of this telephone conversation, but, not without making me tell her first, just how old the J. offspring was. It was only later, as she was telling me what had happened, that I could understand what made her fairly sputter with anger while she spoke. You see, Mrs. J.'s son is *three years* old!

A.E.B., M.D.
Brooklyn, New York

Efficiency Policy

My mother visited me recently and had a coronary. After three weeks of recuperation, we decided to send her home in a compartment. When I purchased the compartment ticket, I explained to the agent it was to be used for a cardiac. He said in a serious strain, "That won't matter. We'll fumigate it as soon as she leaves it!"

W.C.J., M.D.
Booneville, Mississippi

Celibated Birth

A colleague of mine admitted a young primipara to the local hospital via telephone, as she told him she was in labor. No intern was available and, as I was in that Department to see another patient, the Lying-in Room nurse asked me to check her progress.

After draping her properly, and while my finger was still in the rectum, I said, "She is not dilated. In fact, she is not even engaged."

The patient suddenly rose up and heatedly said, "I am, too, engaged and, what is more, I am going to get married."

I withdrew from the room completely floored and with no further comment.

J.M.K., M.D.
Sioux City, Iowa



new, superior

McNEIL Laboratories, Inc • Philadelphia 32, Pa.

SPECIFIC FOR PAINFUL MUSCLE SPASM

PARAFLEX*

Chlorzoxazone†

skeletal muscle relaxant

HIGHLY EFFECTIVE WITH PRACTICAL DOSAGE

in common traumatic, orthopedic, arthritic and rheumatic disorders, including: low back pain • sprains • strains • rheumatoid arthritis • osteoarthritis • spondylitis • myalgia • fibrositis • cervical root syndrome • wry neck • disc syndrome

EFFECTIVELY RELIEVES SPASM AND PAIN—In a controlled, double-blind study, marked improvement was reported in all but one of 15 patients treated with PARAFLEX.[1] Another investigator noted that symptoms were at least partially alleviated in all of the patients treated.[2]

PRODUCES LONG-LASTING BENEFITS—Significant blood levels following the administration of PARAFLEX are maintained for periods of 6 hours or more.[3] In most patients, the beneficial effects of PARAFLEX persisted for approximately six hours.[4]

AVERAGE DOSE—SIX TABLETS DAILY—With PARAFLEX, just one or two tablets, three times daily is an average effective dose. In experimental studies, PARAFLEX was found to be from one and one-half to three times as potent as other commonly used muscle relaxants.

IS WELL TOLERATED—Side effects are uncommon and seldom severe enough to require discontinuation of the drug.[5] Other clinicians have encountered few side effects to date.[1,2,4,6,7]

SUPPLIED—Tablets, scored, orange, bottles of 50. Each tablet contains 250 mg. of PARAFLEX.

REFERENCES—(1) Settel, E.: Personal communication. (2) Holley, H. L.: Personal communication. (3) Burns, J. J.; Troutof, N., and Brodie, B. B.: To be published. (4) Smith, R. T.: To be published. (5) Peak, W. P., and Smith, R. T.: To be published. (6) Wiesel, L. L.: Personal communication. (7) Passarelli, W. W.: Personal communication.

CLINICAL RESULTS WITH PARAFLEX

Investigator	Disorder	Number of patients treated	Number of patients benefited	Comment
Settel[1]	acute low back pain, acute traumatic myofascitis, or osteoarthritis	15	14	response excellent in nine, good in five
Holley[2]	wry neck, cervical spondylitis, and disc syndrome	30	30	improvement, ranging from some amelioration of symptoms to profound relief
Wiese[3]	advanced osteoarthritis	12	10	less muscle spasm and pain
Passarelli[7]	degenerative and rheumatoid arthritis	9	9	improvement, with less stiffness and freer motion
Passarelli[7]	varied arthritic rheumatic, and traumatic disorders	6	6	less stiffness, less pain
Totals		82	69	

*Trade mark †U. S. Patent Pending

174888



Whitis DELECTAVITES

A complete ONE-A-DAY "vita-mineral" supplement in delectable, chocolate-like, foil wrapped nuggets— to satisfy a natural desire and to fill a physiologic need —PLEASANTLY

Each delicious foil wrapped nugget contains:

Vitamin A	5,000 U.S.P. Units	Biotin	20 mcg.
Vitamin D	1,000 U.S.P. Units	Rutin	12 mg.
Vitamin C	75 mg.	Calcium	50 mg.
Vitamin E	2 Int. Units	Boron	0.1 mg.
Vitamin B_1	2.5 mg.	Cobalt	0.1 mg.
Vitamin B_2	2.5 mg.	Fluorine	0.1 mg.
Vitamin B_6	1 mg.	Iodine	0.2 mg.
Vitamin B_{12} Activity	3 mcg.	Magnesium	3.0 mg.
Panthenol	5 mg.	Manganese	1.0 mg.
Nicotinamide	20 mg.	Molybdenum	1.0 mg.
Folic Acid	0.1 mg.	Potassium	2.5 mg.

DOSE: **ONE DELECTAVITE NUGGET DAILY** • SUPPLY: Box of 30 (one month's supply) • Box of 90 (three months' supply)

ONLY DELECTAVITES CAN BE CHEWED WITHOUT EVEN A TRACE OF VITAMIN FLAVOR!

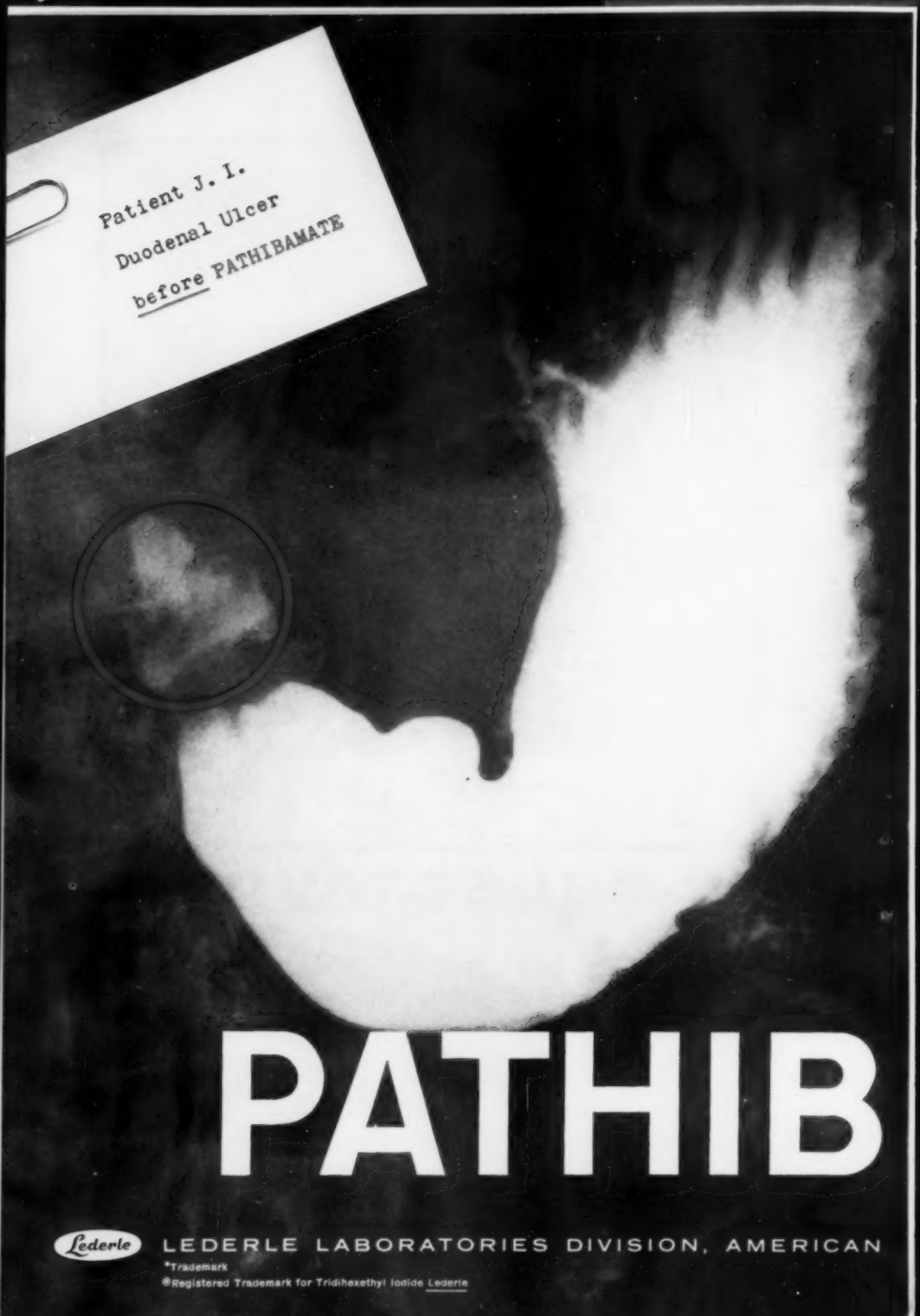
THIS
IS
NEW!

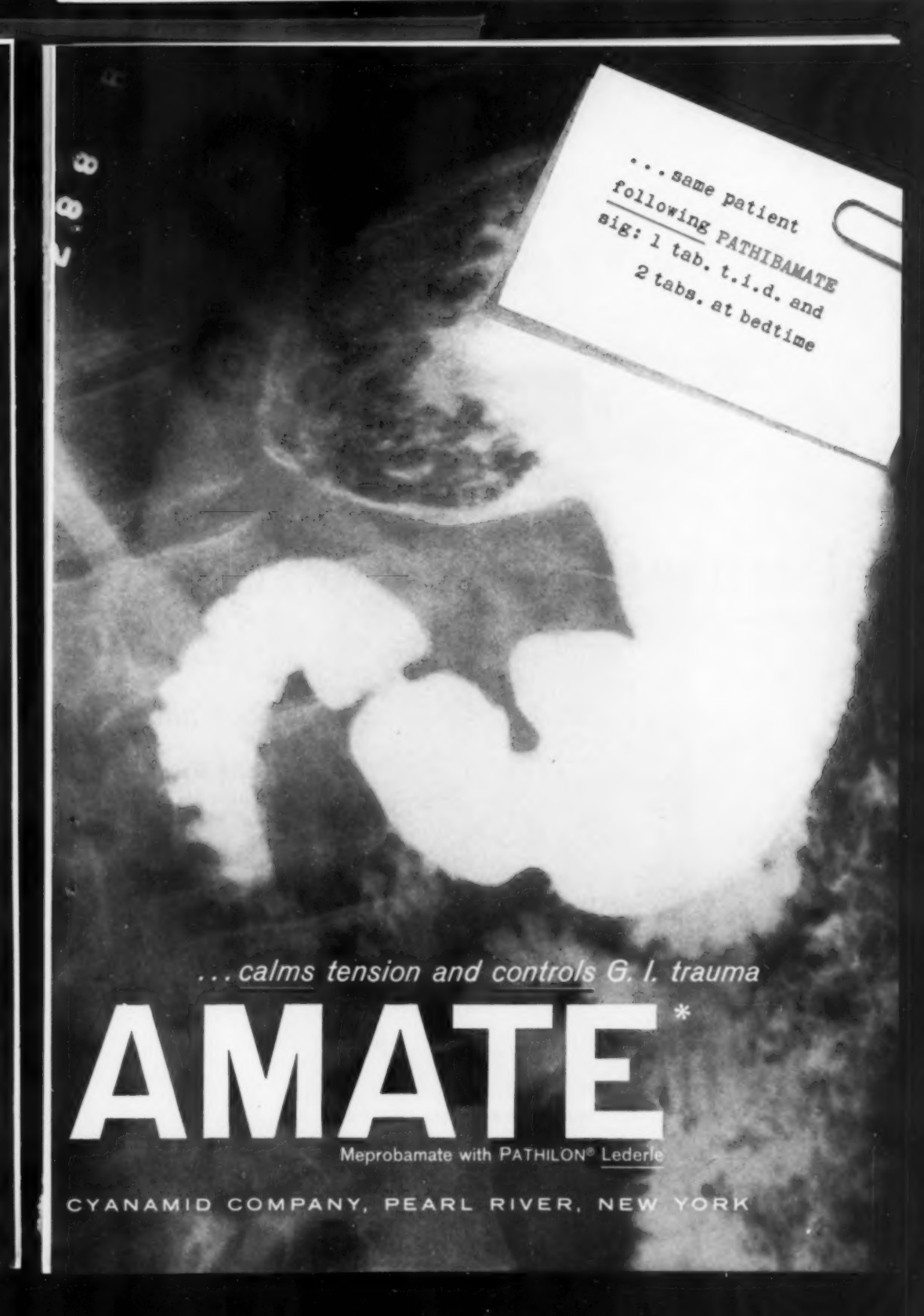


White's DELECTAVITES

LOOK LIKE CHOCOLATE
TASTE LIKE CHOCOLATE
MAKE TAKING VITAMINS—
A CHOCOLATE-LIKE TREAT

WHITE LABORATORIES, INC., Kenilworth, N. J.


Patient J. I.
Duodenal Ulcer
before PATHIBAMATE
PATHIB
Lederle
LEDERLE LABORATORIES DIVISION, AMERICAN
*Trademark
®Registered Trademark for Tridihexethyl Iodide Lederle


. . . same patient
following PATHIBAMATE
sig: 1 tab. t.i.d. and
2 tabs. at bedtime
. . . calms tension and controls G. I. trauma
AMATE*
Meprobamate with PATHILON® Lederle
CYANAMID COMPANY, PEARL RIVER, NEW YORK

in angina pectoris

new

Peritrate® *with* Nitroglycerin

(brand of pentaerythritol tetranitrate)

to relieve the acute attack and sustain coronary vasodilatation

the long-acting emergency tablet for "stress days"

Peritrate with Nitroglycerin (an uncoated, sublingual tablet which disintegrates immediately) contains 1/200 gr. nitroglycerin plus 10 mg. Peritrate (sublingual). It provides immediate relief of anginal pain with hours of sustained coronary vasodilatation.
Dosage: 1 tablet sublingually as needed.

WARNER-CHILCOTT

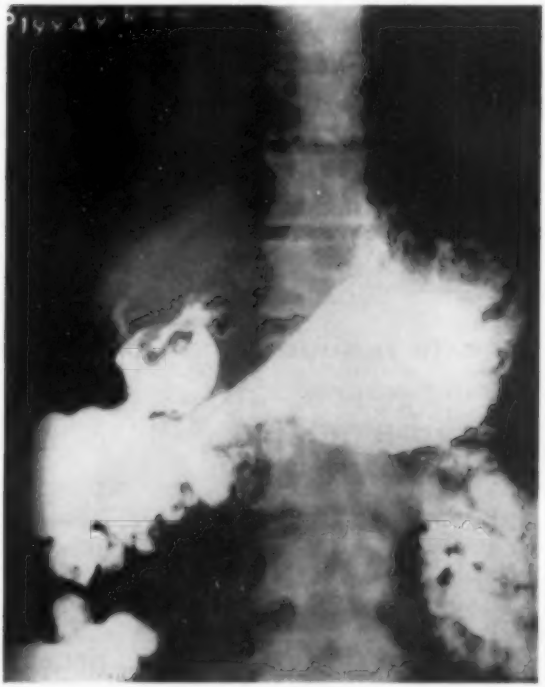
Diagnosis, Please!

Edited by Maxwell H. Poppel, M.D., F.A.C.R., Professor of Radiology,
New York University College of Medicine and Director of Radiology, Bellevue Hospital Center

WHICH IS *YOUR* DIAGNOSIS?

1. Normal
2. Simple ulcer
3. Perforated ulcer
4. Carcinoma

(Answer on page 188a)



NEW . . .

for **advanced management**

of inflammatory

anorectal disorders

WYANOIDS® HC

Rectal Suppositories with Hydrocortisone, Wyeth

- Acute and chronic nonspecific proctitis
- Radiation proctitis
- Proctitis accompanying ulcerative colitis
- Medication proctitis
- Acute internal hemorrhoids
- Cryptitis
- Postoperative scar tissue with inflammatory reaction
- Internal anal pruritus

hydrocortisone to reduce inflammation and edema . . . plus the WYANOIDS formula to relieve itching, burning, soreness, pain

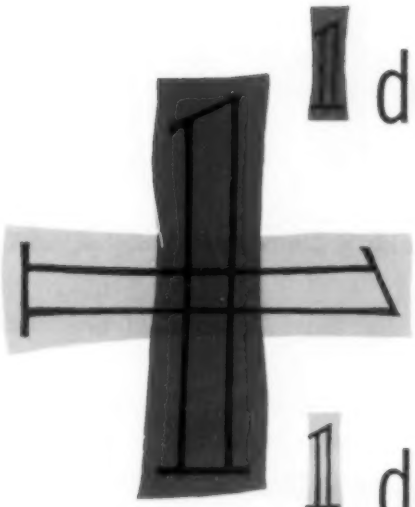
Composition: Each suppository contains hydrocortisone (as acetate), 10 mg.; extract belladonna, 0.5% (equiv. total alkaloids, 0.0063%); ephedrine sulfate, 0.1%; zinc oxide, boric acid, bismuth oxyiodide, bismuth subcarbonate, and balsam peru in an oleaginous base.

Supplied: WYANOIDS with Hydrocortisone, boxes of 12.

Comprehensive literature available on request

Wyeth®

Philadelphia 1, Pa.



1 dose A.M.

1 dose P.M.

add up to

Lipo Gantrisin

ROCHE

- prompt, lasting therapeutic blood levels
- unsurpassed record of effectiveness and safety
- new, improved flavor

1 dose A.M.  1 dose P.M.

are sufficient to combat most urinary and systemic infections of non-viral—non-rickettsial origin. Faster and more prolonged blood levels, plus a new and improved vanilla-mint flavor, make Lipo Gantrisin the ideal pediatric form of Gantrisin. Follow this regimen and note the quick response.

Supplied in bottles of 4 and 16 oz.

Dosage: Teaspoonfuls every 12 hours

Children . .	20 lbs—1	60 lbs—2	(No alkalis or fluids need be given.)
	40 lbs—1½	80 lbs—3	
Adults	4 or 5		

Lipo Gantrisin

ROCHE

Roche Laboratories · Division of Hoffmann-La Roche Inc · Nutley 10 · N. J.

Lipo Gantrisin® Acetyl—brand of acetyl sulfisoxazole in a homogenized mixture Roche—Reg. U.S. Pat. Off.

2

more
accurate
diagnosis

THE NEW
ALL-NEW
BIRTCHER 300

SPEED ELECTROCARDIOGRAPH



Tachycardia, encountered in children and frequently in the aged, makes electrocardiograms difficult or impossible to read. The double speed feature of the new Birtcher 300 Electrocardiograph makes reading these, and all other traces where a double magnification of the horizontal is desirable, more accurate. Dual speed is just one of 19 engineering achievements found in the Birtcher 300 . . . a result of more than 22 years devoted to the manufacture of the finest medical electronic equipment.

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Fill out the coupon or attach it to your prescription blank for our new full color brochure illustrating 19 engineering achievements found in the new Birtcher 300 Electrocardiograph. No obligation.

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Send me descriptives detailing the engineering achievements in the new Birtcher 300 Electrocardiograph.

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Address _____
City _____ Zone ____ State _____

Chemically and Pharmacologically Different DULCOLAX is bis(p-acetoxyphenyl)-2-pyridylmethane, a new synthetic compound which does not depend on systemic absorption but acts by direct contact on the colonic mucosa. **Clinically Distinctive** DULCOLAX is the only laxative which, administered either orally or rectally causes normal peristalsis **throughout** the colon, producing soft, formed stools. It is effective in all types of constipation irrespective of intestinal muscle tone. The prompt acting suppositories may often be used to replace enemas. Both tablets and suppositories have been employed to prepare patients for operative, sigmoidoscopic and radiological procedures and after rectal and other surgery.

UNIQUE! NEW!



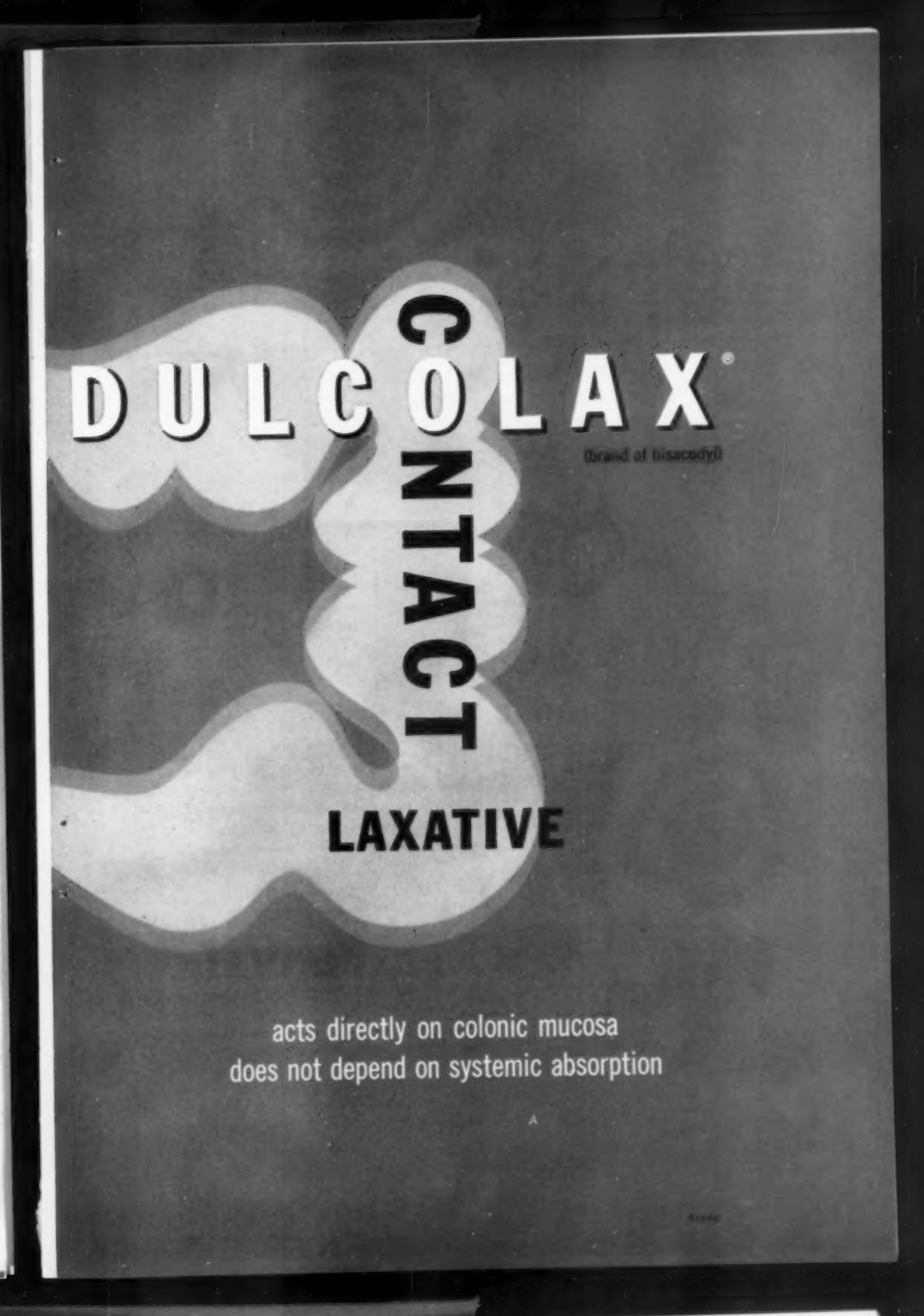
Safe, Effective and Gentle DULCOLAX is virtually nontoxic and free from side effects. In fact the only contraindication is an acute surgical abdomen. Its gentle and effective action makes it the laxative of choice for senile and feeble patients, the very young, pregnant and lactating women, and patients with severe and chronic illnesses such as hepatic and renal disease.

Dosage: Tablets: One to 3 (usually 2) at bedtime for bowel movement the following morning, or ½ hour before breakfast for a movement in 1 to 6 hours. Suppositories: One at time bowel movement is required.

Supplied: DULCOLAX® (brand of bisacodyl). Yellow enteric-coated tablets of 5 mg. in boxes of 6 and bottles of 100. Suppositories of 10 mg. in boxes of 6. Under license from C. H. Boehringer Sohn, Ingelheim.

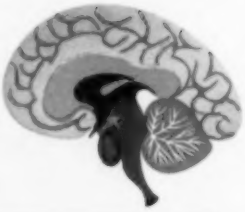
GEIGY

Ardsley, New York


DULCOLAX®
(brand of bisacodyl)
CONTACT
LAXATIVE
acts directly on colonic mucosa
does not depend on systemic absorption

relaxes both mind & muscle

without impairing mental or physical efficiency





well tolerated, relatively nontoxic/no blood dyscrasias, liver toxicity, Parkinson-like syndrome or nasal stuffiness/well suited for prolonged therapy

Supplied: 400 mg. scored tablets, 200 mg. sugar-coated tablets. *Usual dosage:* One or two 400 mg. tablets t.i.d.

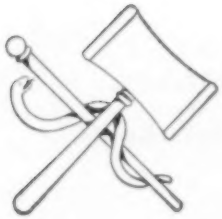
For anxiety, tension and muscle spasm in everyday practice.

Miltown®

tranquilizer with muscle-relaxant action

2-methyl-2-n-propyl-1,3-propanediol dicarbamate

WALLACE LABORATORIES, NEW BRUNSWICK, N. J.



What's Your Verdict?

Edited by Ann Ledakowich, Member of the Bar of New Jersey

A sixteen-month-old baby, while playing in her home, fell and cut her hand on a broken glass bottle. She was taken by her parents to the local hospital and treated by an intern then on duty. The child was crying and struggling in her pain so that she had to be held by her parents as well as a student nurse.

The intern examined the wound, treated it and sewed it up. In response to a question by the infant's father, he represented that the tendons of the hand were not severed.

Subsequently the child was taken to another hospital for examination and it was there learned that the tendon serving the index finger of her right hand had been severed and that an operation would be necessary to repair it.

A court action commenced on the infant's behalf against the former hospital for the alleged negligence of its intern in diagnosing and treating the child's injuries.

The plaintiff produced two physicians to testify as expert witnesses. They testified that in the treatment of a hand wound it is routine practice to determine by visual examination whether the tendons have been severed. However, this may be impossible if the patient is an uncooperative child because diagnosis requires that the patient permit the flexion of the fingers. When a tendon has been severed, an operation is invariably necessary. The operation need not be immediate, and its postponement even for a period of years will not result in any permanent disability.

As of the date of trial, approximately four years following the injury, the operation had not been performed.

At the close of the plaintiff's case the trial court directed a verdict for the physician, from which the plaintiff appealed. On appeal, what would be your decision?

Answer on page 166a



Men Constantly on Their Feet...

physiologically prone to hemorrhoids

PNS® SUPPOSITORIES

combine
three outstanding,
dependable therapeutic agents:

RELIEVE PAIN

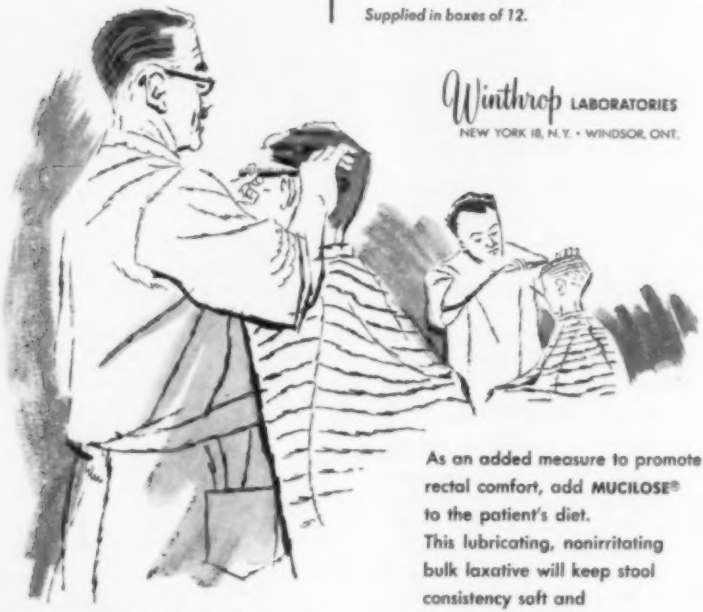
REDUCE SWELLING

PROTECT AGAINST INFECTION

Pontocaine® hydrochloride	10 mg.
Neo-Synephrine® hydrochloride	5 mg.
Sulfamylon® hydrochloride	200 mg.
Bismuth subgallate	100 mg.
Balsam of Peru	50 mg.

— in a cocoa butter base —

Supplied in boxes of 12.



Winthrop LABORATORIES
NEW YORK 18, N.Y. • WINDSOR, ONT.

As an added measure to promote rectal comfort, add **MUCILOSE®** to the patient's diet. This lubricating, nonirritating bulk laxative will keep stool consistency soft and facilitate evacuation.

PNS, Pontocaine (brand of tetracaine), Neo-Synephrine (brand of phenylephrine), Sulfamylon (brand of mafenide) and Mucilose, trademarks reg. U. S. Pat. Off.



SCHERING CORPORATION · BLOOMFIELD, NEW JERSEY Schering

NOW
a bactericidal
urinary
antiseptic

NEW

CATHOZOLE®

(Sodium Novobiocin with Sulfamethylthiadiazole)



Antibacterial spectrum: 'CATHOZOLE' is bactericidal and has an exceptionally broad antibacterial spectrum. It is highly effective against the most frequent and even against some of the most stubborn urinary tract infections (*E. coli, P. vulgaris,* pseudomonas and staphylococcus).

Speed of action: Pain, frequency, burning and irritation usually subside within 24 hours.

Urinary tract concentration: Achieves effective levels, higher than those attained with any other urinary tract antiseptic.

Solubility: *Highest* solubility and *lowest* acetylation of any available urinary tract antiseptic. Less hazard of crystalluria.

Tolerance: Oral dosage forms well tolerated. Relatively rare side effects.

Indications: Acute and chronic, uncomplicated and resistant urinary tract infection in young and old. No cross resistance with other urinary tract antiseptics.

Supplied: Tablets 'CATHOZOLE'—in bottles of 24 and 100 tablets, each containing 125 mg. 'Cathomycin' Novobiocin (as sodium novobiocin) and 375 mg. sulfamethylthiadiazole.

CATHOZOLE is a trademark of Merck & Co., Inc.

MERCK SHARP & DOHME
DIVISION OF MERCK & CO., INC., PHILADELPHIA 1, PA.



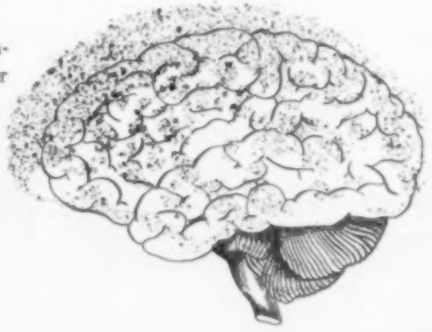
A beautiful imported German apothecary jar will be sent to each contributor of an unusual case report.

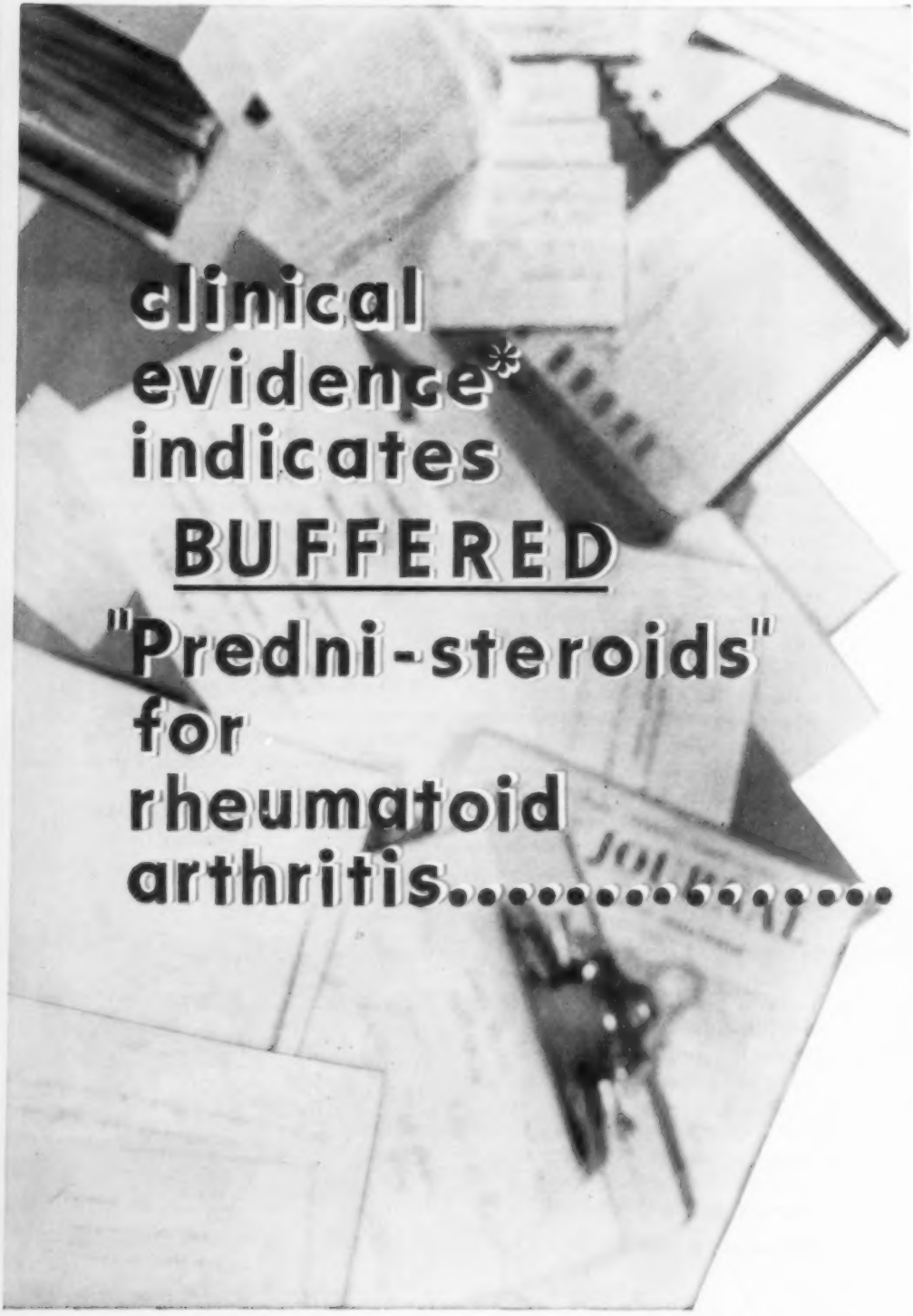
A 63 year old painter was installing window screens on his home on a Sunday. He was found unconscious, at the bottom of his ladder, by a neighbor. However, no one had witnessed the fall and the height from which he may have fallen was not known. The patient was comatose and in shock when admitted to the hospital 30 minutes later. He was maintained by artificial respiration and supportive measures. Lumbar puncture produced grossly bloody spinal fluid. The opinion of the neurological consultant was that the fall may have been preceded by a spontaneous cerebral hemorrhage or infarction. It was reasonable to assume that a painter, accustomed to ladders, would not have fallen unless disabled. The patient died in coma approximately 44 hours later.

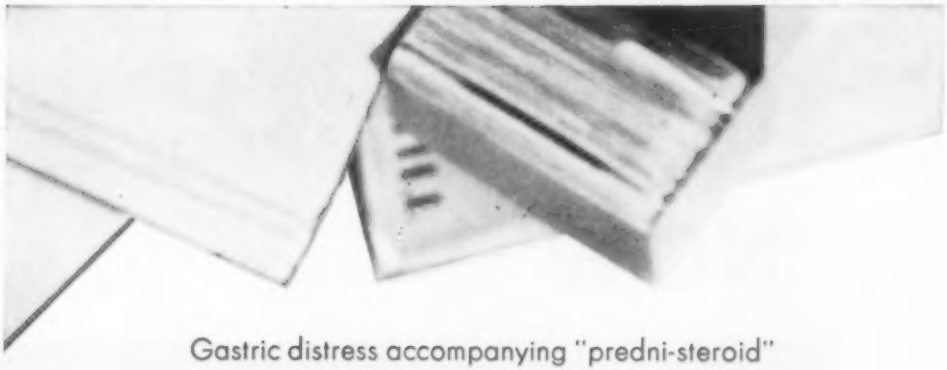
Since the circumstances of death included a possible injury, the Coroner had jurisdiction. With the consent of the Coroner, an autopsy was performed by the hospital pathologist. The brain showed contusions and hemorrhages, obviously caused by trauma. There was no evidence of spontaneous cerebral hemorrhage or infarction, and no evidence of preexisting disease of the arteries or parenchymatous organs sufficient to have caused the patient to lose control of himself while on the ladder. Death was therefore presumed to be due to an accidental fall.

The importance of the autopsy was more than to establish the exact cause of death for statistical purposes. The patient carried "double indemnity" life insurance and the autopsy findings, competently interpreted, enabled the widow to claim the additional indemnity.

A. J. Segal, M.D.
Cleveland, Ohio




clinical
evidence*
indicates
BUFFERED
"Predni-steroids"
for
rheumatoid
arthritis.....



Gastric distress accompanying "predni-steroid" therapy is a definite clinical problem — well documented in a growing body of literature.

*"In view of the beneficial responses observed when antacids and bland diets were used concomitantly with prednisone and prednisolone, we feel that these measures should be employed prophylactically to offset any gastrointestinal side effects."—Dordick, J. R. *et al.*: N. Y. State J. Med. 57:2049 (June 15) 1957.

*"It is our growing conviction that all patients receiving oral steroids should take each dose after food or with adequate buffering with aluminum or magnesium hydroxide preparations."—Sigler, J. W. and Ensign, D. C.: J. Kentucky State M. A. 54:771 (Sept.) 1956.

*"The apparent high incidence of this serious [gastric] side effect in patients receiving prednisone or prednisolone suggests the advisability of routine co-administration of an aluminum hydroxide gel."—Bollet, A. J. and Bunim, J. J.: J. A. M. A. 158:459 (June 11) 1955.

One way to make sure that patients receive full benefits of "predni-steroid" therapy plus positive protection against gastric distress is by prescribing CO-DELTRA or CO-HYDELTRA.

Co-Deltra®

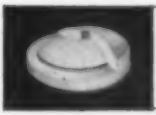
PREDNISONE BUFFERED

multiple compressed tablets

provide all the benefits of "Predni-steroid" therapy— plus positive antacid protection against gastric distress

Co-Hydeltra®

PREDNISOLONE BUFFERED



2.5 mg. or 5.0 mg. of prednisone or prednisolone, plus 300 mg. of dried aluminum hydroxide gel and 50 mg. magnesium trisilicate, in bottles of 30, 100, 500.

MERCK SHARP & DOHME Division of MERCK & CO., Inc., Philadelphia 1, Pa. MSD

NOW

COUNTERACT DEPRESSED MOODS *without stimulation*

- Relieves depression without euphoria —*not a stimulant*
- Restores natural sleep without depressive aftereffects —*not a hypnotic*

- Rapid onset of action
- Side effects are minimal and easily controlled

▲Deprol▲

Composition: Each tablet contains 400 mg. meprobamate and 1 mg. benactyzine HCl

Average Adult Dose: 1 tablet q.i.d.

WALLACE LABORATORIES, *New Brunswick, N. J.*

Literature and samples on request

5167



AFTER HOURS

K4LTX

K4LTX is Dr. L. J. Polskin, president of the Lakeland (Fla.) Amateur Radio Society. I don't consider the title, "Ham", as being derogatory. Ham, a corrupt enunciation of the word, "amateur", marks an accomplishment in the field of *wireless* communication. If you do not belong to this national fraternity of 150,000 hams, a most fascinating, scientific hobby awaits you. This hobby, like the doctor, is available 24 hours around the clock. Whether one wishes to communicate by voice or by International Morse Code, it takes but a spin of the knobs of the short-wave transmitter to find a contact in a matter of seconds. If your schedule has not been pre-arranged, your plaintive call, "CQ, CQ, CQ—", might be answered from any part of the world by a farmer, business executive, reverend, or a mere child! Alas, how rare to find a doctor ham! It is a custom to confirm a call by written acknowledgment, called the QSL card. Collecting such cards, like that of stamps or match-covers, is a hobby in itself. The identification letters of the

—Continued on page 49a

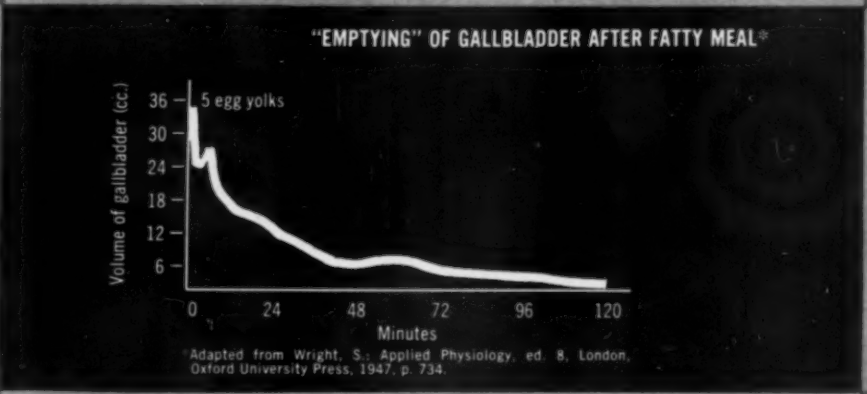


Dr. Polskin "hamming" it.

Photographs with brief description of your hobby will be welcomed. A beautiful imported German apothecary jar will be sent to each contributor.

AN AMES CLINIQUICK

CLINICAL BRIEFS FOR MODERN PRACTICE



What's wrong with the term "emptying of the gallbladder"?

The gallbladder discharges bile by fractional evacuation. It is not emptied completely at any one time even following a fatty meal.

Source—Lichtman, S. S.: Diseases of the Liver, Gallbladder and Bile Ducts, ed. 3, Philadelphia, Lea & Febiger, 1953, vol. 2, p. 1177.

routine physiologic support for "sluggish" older patients

DECHOLIN® one tablet t.i.d.
therapeutic bile

Increases bile flow and gallbladder function—combats bile stasis and concentration... helps thin gallbladder contents.

corrects constipation without catharsis—prevents colonic dehydration and hard stools... provides effective physiologic stimulant.

DECHOLIN tablets (dehydrocholic acid, AMES) 3¾ gr. Bottles of 100 and 500.

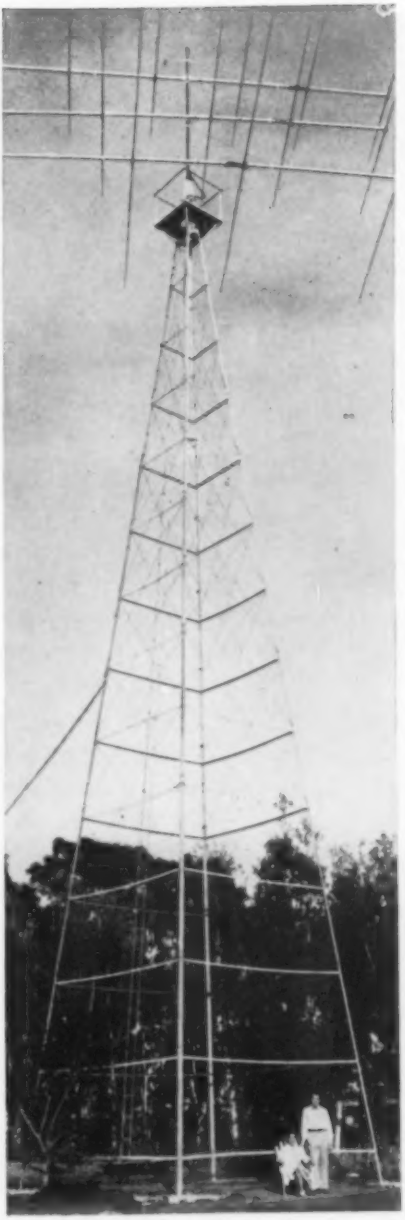
AMES COMPANY, INC • ELKHART, INDIANA
Ames Company of Canada, Ltd., Toronto

amateur operator are depicted on these cards, and in many states (e.g. Florida), one may also sport these station letters as an automobile plate in lieu of the ordinary numbered tag.

Amateur radio operation is the only hobby licensed by the federal government (FCC) and recognized by international treaty. A maxim of the national organization, the American Radio Relay League, states, "Amateur radio exists as a hobby because it qualifies as a service." Contributions made by hams during storms, disasters and the recent tracking of satellites are well known. A most rewarding feature of ham radio is the host of friends one makes over the airlanes. This small league of operators is constantly performing an important duty which rarely makes headlines, namely, that of advertising the American way of life to individuals in the darker corners of the world.

Doctor, here is the hobby of hobbies. Training is available free in one to several cities in your state. The wife and offspring may study with you! One does not have to be an electrical engineer to pass the FCC examinations. Gray's "Anatomy" text was tougher to digest. If you are determined to sacrifice the 25th hour for a few months in order to achieve that coveted license, contact me with your questions. I did this only two years ago, and the hobby has proved an asset to my practice.

LOUIS J. POLSKIN PH.D., M. D.
1401 S. Florida Ave.
Lakeland, Florida



Dr. and Mrs. Polskin and their "ham" antenna.



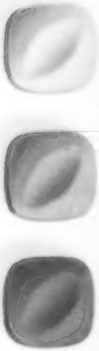
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BRAND OF PHENYLAZO-DIAMINO-PYRIDINE HCL

fills the gap between complaint and correction of urinary tract disorders. In 20-25 minutes, Pyridium gives relief of urinary tract symptoms, even before the cause can be effectively treated. Diagnosis, antibacterial action or surgery may take time—but pain relief can be immediate with Pyridium, the standard urinary tract analgesic. **WARNER-CHILCOTT**



now...
in soluble tablets, too!



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Poly-Vi-Sol®

Deca-Vi-Sol®

Mead Johnson
Symbol of service in medicine





They taste delicious…dissolve re

Tri-Vi-Sol®

3 basic vitamins

drops • tablets



ve readily in the mouth

for easier vitamin protection
of infants and children . . .

you can now select
both formulation and form
from the 'Vi-Sol' Family

The 'Vi-Sol' tablets give you a new, appealing dosage form for continuing vitamin protection of children as you "graduate" them from drops.

'Vi-Sol' drops and tablets have delicious fruit-like flavors . . . are easy to give, stable, and hypoallergenic.

Now . . . when you prescribe Tri-Vi-Sol, Poly-Vi-Sol or Deca-Vi-Sol, be sure to specify form: drops or tablets.
Drops available in bottles of 15, 30 and 50 cc.; Tablets, in bottles of 24 and 100.

Poly-Vi-Sol®
6 essential vitamins
drops • tablets

Deca-Vi-Sol®
10 significant vitamins
drops • tablets



Symbol of vitamin protection

You can select the appropriate instructions for mothers from the Mead Johnson family of printed services.

- *to save time for you*
- *to supplement your directions*
- *to give mothers added confidence*

"Your Baby's Health Record"—
booklet for distribution to mothers. Space provided for physician formula and feeding instructions and vitamin specifications; also formula preparation instructions (both terminal heating and aseptic method). When ordering, specify Dextri-Maltose or Lactum version.

"Formula Products Wall Cards"—
formula prescription blank and preparation instructions and vitamin specifications. Designed to hang in kitchen for convenient reference by mothers. When ordering, specify Lactum, Olac, or Dextri-Maltose. Preparation instructions cover both terminal heating and aseptic methods.

"Prescription Sheets"—
Formula—available for any Mead Johnson product: include preparation specification.
Vitamin—for infants and children, specifying individual 'Vi-Sol' drops or tablets (Tri-Vi-Sol, Poly-Vi-Sol, Deca-Vi-Sol) with area provided for additional physician instructions.

For further information on any of the Mead Johnson printed services, ask your Mead Johnson Representative or write to us, Evansville 21, Indiana.

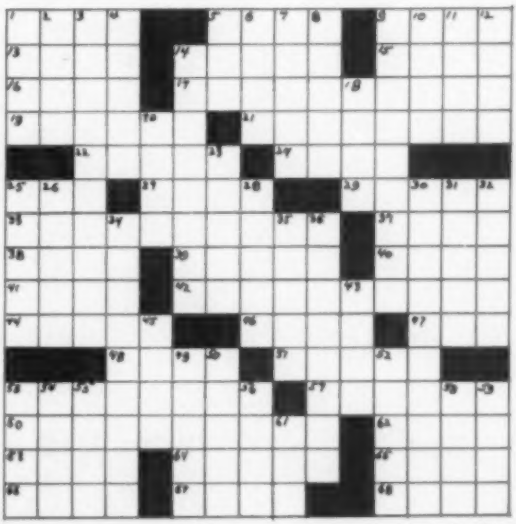


Mead Johnson
Symbol of service in medicine

Medical Teasers

A Challenging Crossword Puzzle for the Physician

(Solution on page 170a)



by Angela Koelliker

ACROSS

1. A very small green bryophytic plant
5. Against
9. Loop
13. Before
14. Alkyloxyphenylguanidin
15. An aromatic So. Am. bark
16. ——of the Fornix (harp-like portion)
17. Cavity formed by the invagination of the blastodermic vesicle
19. The armpit
21. Of the absence of contractility (Lat.)
22. A monster without a trunk
24. ——sler's Ganglion; —— enlargement of the left supraclavicular lymph-gland
25. Pock-mark
27. Compounds: Abbr.
29. The Palatinate: German name
33. —— cordis; a fatty condition of the heart
37. Upper part of the innominate bone (pl.)
38. Five (comb. form)
39. Silver citrate
40. Eline (sym.) and In (prefix)
41. The menhaden
42. Wild ginger and part from which stimulant is made
44. Like bones
45. Yttrium and Germanium (symbs.)
47. One (Fr.)
48. Genus of fish (burbots)
51. —— nasi; an oblique on inner surface of the nasal process of the maxilla
53. Combining form meaning mustard, and white, from which a white crystalline substance comes
57. Medicinal
60. A mature segment of the tape-worm
62. Teak: Phil. I.
63. ——n, National Laboratory
65. Donkey: (Ger.)
66. Itinerant burglar
67. Being (Lat.)
68. River on the edge of Hell
69. Direction

DOWN

1. The cheek-bone
2. Birthstone
3. Streakings
4. Impressions that make diplomas authentic
5. Anesthetic mixture of alcohol, chloroform, and ether
6. —— me tangere; hands off!
7. II ——; he keeps
8. Internal
9. Agent to change something into vinegar
10. Japanese gelatin used in bacteriology
11. Greek portico
12. First-class
18. De ——; superfluous
20. Weed poisonous to flocks and herds
23. Entrances
25. Downy beard on cheeks or chin: (Lat. abl.)
26. Ideas (comb. form)
28. Be in error
30. What we need to recover from exhaustion
31. —— the bed; what we do to get 30 Across
32. One of the Ionian Islands off western Greece
34. An agent increasing the flow of saliva
35. Main arterial trunk
36. Slow in passing
43. Large
45. Let hang loosely, as the tongue
49. Steak
50. Self, (Greek)
52. Plural diminutive suffix
53. Remove the ovaries
54. Not again: negative prefix
55. Made with an egg for invalids
56. Steamers: Abbr.
58. Very cold
59. Heel
61. Noun forming suffix meaning a part of the body

for sure antibacterial control

in urinary tract infections

mandelamine

It's effective against almost all types of urinary tract organisms . . . controls even antibiotic and sulfonamide-resistant bacteria. Yet, Mandelamine is *not* an antibiotic! Mandelamine won't sensitize patients . . . no resistant bacterial strains develop . . . side effects are minimal. Mandelamine is one of the safest of all drugs for prolonged use, and—happily for patients—costs far less than other antibacterial agents!

safe for long-term use for all ages

Supplied in Hafgrams® (0.5 Gm. tablets), 0.25 Gm. tablets, and pleasantly flavored Mandelamine Suspension for pediatric use. Adults take an initial daily dose of 4 to 6 Gm., and can be maintained on 3 Gm. daily indefinitely. Children need as little as 1 Gm. daily. (Mandelamine Discs, for quick identification of Mandelamine-sensitive bacteria, available from your laboratory supply house.)

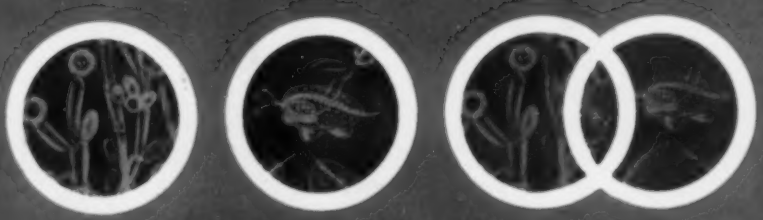
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MANDELAMINE®

Brand of methenamine mandelate

safe and effective for chronic urinary tract infections

NEPERA



for vaginal moniliasis, trichomoniasis or both

a new specific moniliacide MICOFUR™ is combined with the established specific trichomonacide FUROXONE® in

IMPROVED

TRICOFURON®

VAGINAL SUPPOSITORIES AND POWDER

85% CLINICAL CURES* In 213 patients with either trichomonal vaginitis, monilial vaginitis or both, clinical cures were secured in 187.

71% CULTURAL CURES* 157 patients showed negative culture tests at 3 months' follow-up examinations. Patients reported rapid relief of burning and itching, often within 24 hours.

Simple two-step treatment swiftly brings relief and control of vaginal moniliasis and trichomoniasis.

STEP 1 *Office* administration of TRICOFURON VAGINAL POWDER IMPROVED at least once weekly.

STEP 2 *Home* use of TRICOFURON VAGINAL SUPPOSITORIES IMPROVED by the patient, 1 or 2 daily, including the important menstrual days.

*Combined results of 12 independent clinical investigators. Data available on request.

SUPPOSITORIES: 0.375% Micofur, 0.25% Furoxone.

NEW! Box of 24 bullet-shaped suppositories, each hermetically sealed in green foil; with applicator.

Box of 12 wedge-shaped suppositories without applicator.

POWDER: 0.5% Micofur, 0.1% Furoxone. Plastic insufflator, 15 Gm.

NITROFURANS—a new class of antimicrobials—neither antibiotics nor sulfonamides

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SALIMEPH-C, specially developed for relief of the pain-spasm-pain cycle in musculo-skeletal disorders, exerts a powerful ACTH-like action without its undesirable side effects.

SALIMEPH-C's active ingredient, like ACTH, acts on the anterior pituitary and the adrenal cortex. Both exert antipyretic, anti-inflammatory, and anti-rheumatic effects.

BUT HERE THE "KINSHIP" ENDS

SALIMEPH-C produces *no* hypertension, *no* hirsutism, *no* edema, acne or psychotic reactions or other side effects common to ACTH and CORTISONE therapy.

In the SALIMEPH-C formula the anti-rheumatic action of Salicylamide is coupled with the profound skeletal muscle relaxant, Mephenesin. Generous quantities of Ascorbic Acid replenish the Vitamin C lost during debilitating diseases and anti-rheumatic therapy.

SALIMEPH-C rapidly relieves the pain which causes the spasm and relaxes the spasm which causes the pain in rheumatoid arthritis, myositis, torticollis, bursitis, low back pain, osteoarthritis, sprains and strains.

*Trademark Kremers-Urban Company

FORMULA:

Each yellow, scored tablet contains:

Salicylamide	250 mg.
Mephenesin	250 mg.
Ascorbic Acid	30 mg.

Prescribe with Confidence

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Ethical Pharmaceuticals Since 1894

IPRONIAZID

the psychic energizer
is available only as

MARSILID

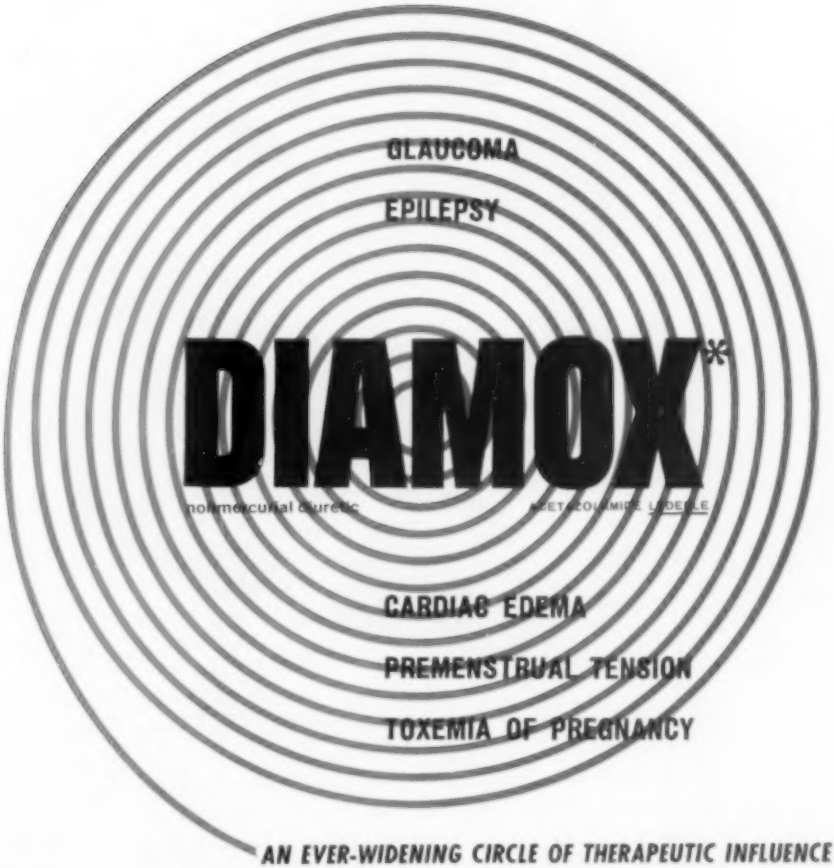
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Marsilid® Phosphate
brand of iproniazid phosphate

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A versatile, dependable **diuretic** – the most widely prescribed of its kind: its unique action as a carbonic anhydrase inhibitor has proved strikingly effective not only in conditions requiring diuretic treatment but in the management of other conditions as well.

DIAMOX is well-suited to long-term therapy. Low toxicity, freedom from renal and gastrointestinal irritation, ease of administration make its use simple and singularly free of complications. Excretion of the drug by the kidney is complete within 24 hours, with no cumulative effects.[1]

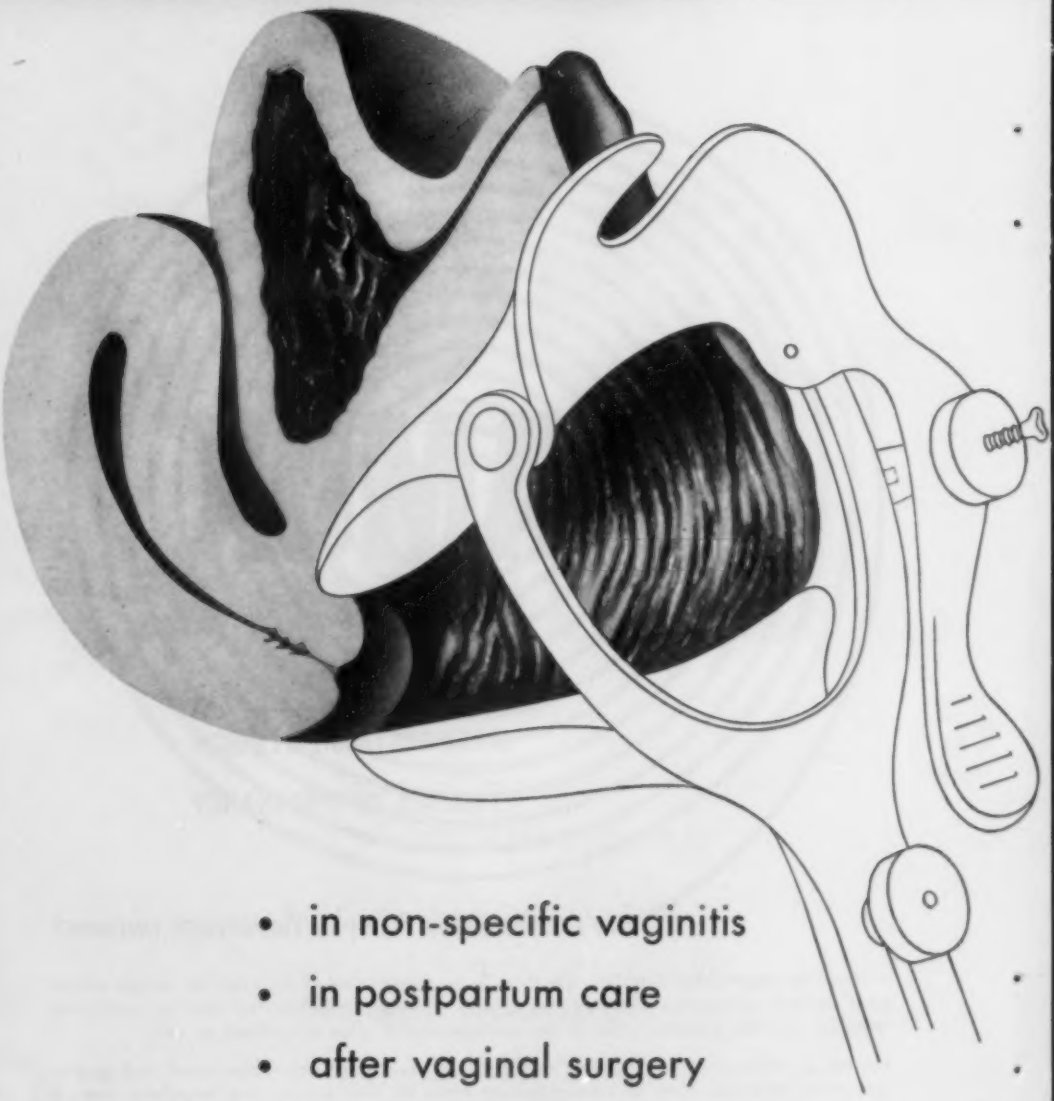
Diuretic treatment with DIAMOX results in continuous rather than intermittent control of edema since DIAMOX is effective in the mobilization of edema fluid and in the prevention of fluid accumulation.[1] A single oral dose, active for 6-12 hours, provides the basis for the highly desirable advantage of daytime diuresis and nighttime rest.

Supplied: Scored Tablets of 250 mg.; Syrup containing 250 mg. per 5 cc. teaspoonful; Vials of 500 mg. for parenteral use.

1. Goodman, L. S. and Gilman, A.: The Pharmacological Basis of Therapeutics. Ed. 2. The Macmillan Co., New York, 1955, p. 856.

LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY PEARL RIVER, NEW YORK

*Reg. U. S. Pat. Off.



- in non-specific vaginitis
- in postpartum care
- after vaginal surgery

Triple Sulfa Cream

TRADEMARK

Ortho



Who Is This Doctor?

He was born in Dalquhurn, Scotland, in 1721. He studied at the University of Glasgow and in 1736 was apprenticed to a surgeon in that city.

At the age of 18 he crossed the border with the proud idea of conquering England with his first literary work "The Regicide." The failure of this tragic play became a stock grievance of his life. He would have starved had he not obtained a position as surgeon's mate on H.M.S. Cumberland where he served during the whole of the siege of Cartagena in 1741.

On his return he began to practice in London, but had little success, and soon turned his attention to writing fiction.

In his first novel "Roderic Random" (1748) he described the life of sailors so vividly that Scott wrote of him: "Everyone who has written about the navy since seems to have copied more from him than from nature."

For several years he tried to combine his literary career with his medical work.

In June 1750 he obtained the degree of Doctor of Medicine at Aberdeen.

After a visit to Paris in 1751, he published his second novel, "The Adventures of Peregrine Pickle," which became a tremendous success both in England and France.

His third novel, "Ferdinand Count Fathom," appeared in 1753. By that time he had abandoned medicine.

In addition to writing fiction he did various other kinds of literary work. He edited "Don Quixote," "History of England" and a seven volume compendium of "Voyages." He also had an important share in the revision of Smellie's "Midwifery," the standard text of that time. In 1758 he projected and partly wrote a vast Universal History and in 1762 edited a periodical called "The Briton." In April of the following year he went abroad to repair his failing health.

In 1769 he went back to Italy and settled near Leghorn where he wrote his last novel "Humphry Clinker." He died at Leghorn on September 17, 1771, and was buried there in the Old English Cemetery.

His powers of observation and brilliancy of description have rarely been equaled in English fiction.

Can you name this doctor? Answer on page 208a.

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POLYMYXIN B—BACITRACIN OINTMENT

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patients
with
colds 

appreciate the **Novahistine LP** effect

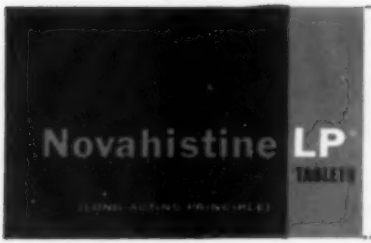
because they get relief 

in a few minutes  and

this relief continues 

for as long as 12  hours

after a single dose of 2  tablets



Each tablet contains:
Phenylephrine hydrochloride.... 20 mg.
Chlorprophenpyridamine maleate 4 mg.
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These important features combine to make LIXATONE Geriatric Elixir (Buffington's) a preferred agent when caring for patients of advanced age, where low vitamin diets are so common, and where cereals are so often substituted for animal sources of protein.

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GERIATRIC ELIXIR (BUFFINGTON'S)

Each 30 cc contains: Liver fraction 1, 750 mg.; betaine HCl, 180 mg.; choline (as tricholine citrate), 180 mg.; inositol, 180 mg.; l-lysine monohydrochloride, 300 mg.; vitamin B12 crystalline, 30 mcg.; thiamine HCl 18 mg.; riboflavin (as monophosphate), 18 mg.; niacinamide, 72 mg.; pyridoxine HCl, 3 mg.; calcium pantothenate, 12 mg.; folic acid (in suspension), 1.5 mg.; alcohol, 10%.

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manages both the psychic and somatic symptoms
relieves emotional stress in the menopause
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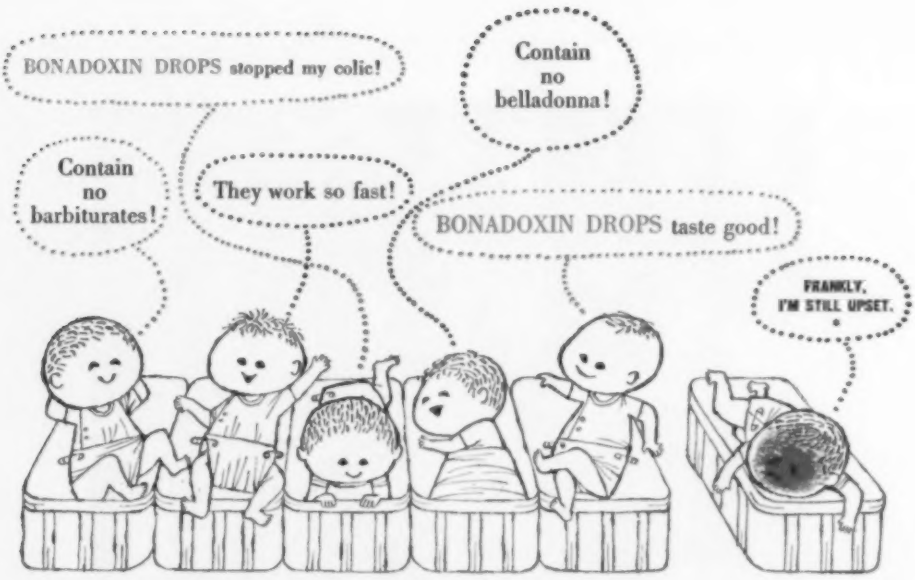
EACH TABLET CONTAINS: Miltown® (meprobamate, Wallace) ..... 400 mg.
2-methyl-2-*n*-propyl-1,3-propanediol dicarbamate
Conjugated Estrogens (equine) ..... 0.4 mg.

DOSAGE: One tablet t.i.d. in 21-day courses with one week rest periods. Should be adjusted to individual requirements.

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NEW

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STOP COLIC...WITHOUT NARCOTICS

When you prescribe BONADOXIN DROPS *you make everybody happy:*

- *baby* gets peaceful sleep, freed of cramps and colic (*BONADOXIN DROPS stop infant colic in 84%[1-2])
- *Mom and Dad* get a vacation from frayed nerves (BONADOXIN DROPS are "effective almost immediately"[4])
- you avoid the risk of belladonna and barbiturates (BONADOXIN DROPS are well-tolerated[1-4])

Next time you get the "colic call," try BONADOXIN DROPS

Each cc. contains: meclizine dihydrochloride . . . 8.33 mg.
pyridoxine hydrochloride . . . 16.67 mg.

dosage:

under 6 months	0.5 cc.	2 or 3 times daily, on the tongue, in fruit juice or water
6 months to 2 years	1.5 to 2 cc.	
2 to 6 years	3 cc.	
adults and children over 6 years	1 teaspoon (5 cc.)	

supplied: *Fruit-flavored, clear green syrup in 30 cc. dropper bottles.*

references: 1. Dougan, H. T.: Personal communication. 2. Leonard, C. L.: Personal communication. 3. Steinberg, C. L.: Personal communication. 4. Litchfield, H. R.: Arch. Podiat. 73:229 (July) 1966.

Roerig Rx

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Division, Chas. Pfizer & Co., Inc.

LETTERS
To The Editor

This department is offered as an Open Forum for the discussion of topical medical issues. All letters mus be signed. However, to protect the identity of writers who are invited to comment on controversial subjects, names will be omitted when requested.

Psychology

The article by Elwyn M. Smolen, *Some Emotional Aspects of Medical Practice* (MT, February, 1958) should be read by all GP's. In recent years I have read many a wordy treatise dealing with the psychological aspects of medical practice and the doctor-patient relationship, but none as clear and effective as Dr. Smolen's.

Many points made by him struck home; this one in particular:

"It is usually assumed that logic, reason, and the scientific impersonal application of the latest scientific achievements in the practice of medicine will prevail. When they do not, it is then just as often assumed that the fault lies somewhere in the realm of scientific methodology or evaluation, rather than in the basic relationship between two human beings."

This basic relationship is one we should never forget.

M.B., M.D.,
New York, N.Y.

Practical Value?

For the life of me I can't see the practical value of having a group of special-

—Concluded on page 70a

IN GASTRIC DISTRESS

2 new, original preparations

for prompt relief sustained effect



for hyperacidity

TROPASIL®

Two unique antacid elements provide prompt, sustained effectiveness. The new milk protein derivative, aluminum proteinate, is combined with the swift acid-neutralizing power of new aluminum magnesium hydroxycarbonate complex, in convenient, mildly flavored swallowable tablets. 1 or 2 t.i.d.

for ulcer-related pain

PROMYL®

The original Tropasil antacid formulation plus the potent cholinolytic, pipenzolate methylbromide, normalizes gastric secretion, reduces g.i. spasm and neutralizes excess acidity. In the presence of ulcer-related pain, 1 tablet q.i.d.

CROOKES-BARNES LABORATORIES, INC. Wayne, New Jersey



urised®

Attacks the Cause
Alleviates Pain
Arrests Infection

Patients—in all age groups—respond readily to the 3 "A"s of URISED. It is effective in virtually all forms of urinary disturbances—even those complicated by serious systemic disease.[1]

ATTACKS THE CAUSE—In minutes, URISED attacks both primary causes of pain and dysfunction: (1) smooth muscle spasm; (2) incidence of infection.

ALLEVIATES PAIN—Prompt antispasmodic action relaxes painful smooth muscle along the urinary tract, brings quick relief to the distressed patient.

ARRESTS INFECTION—Rapid antibacterial action reduces irritation, even overcomes infections previously resistant to antibiotics and sulfonamides.

Prescribe URISED with confidence to relieve frequency, burning, urgency, dysuria, promote rapid restoration of normal urinary function in all urinary affections of all age groups.

1. Strauss, B., Clin. Med., Vol. IV, No. 3, 1957

CHICAGO PHARMACAL COMPANY
Chicago • San Francisco



for your patient who "stands out"

5|3 5|2 5|1 5|0 4|9 4|8 4

PRELUDIN®

(brand of phenmetrazine hydrochloride)

specifically for weight reduction

not an amphetamine, but an oxazine—Chemically different from the amphetamines, PRELUDIN effectively curbs appetite with little or no C.N.S. stimulation.[1,3]

assures progressive and continuous weight loss—PRELUDIN generally produces two to five times the weight loss achieved by dietary means alone.[1,4]

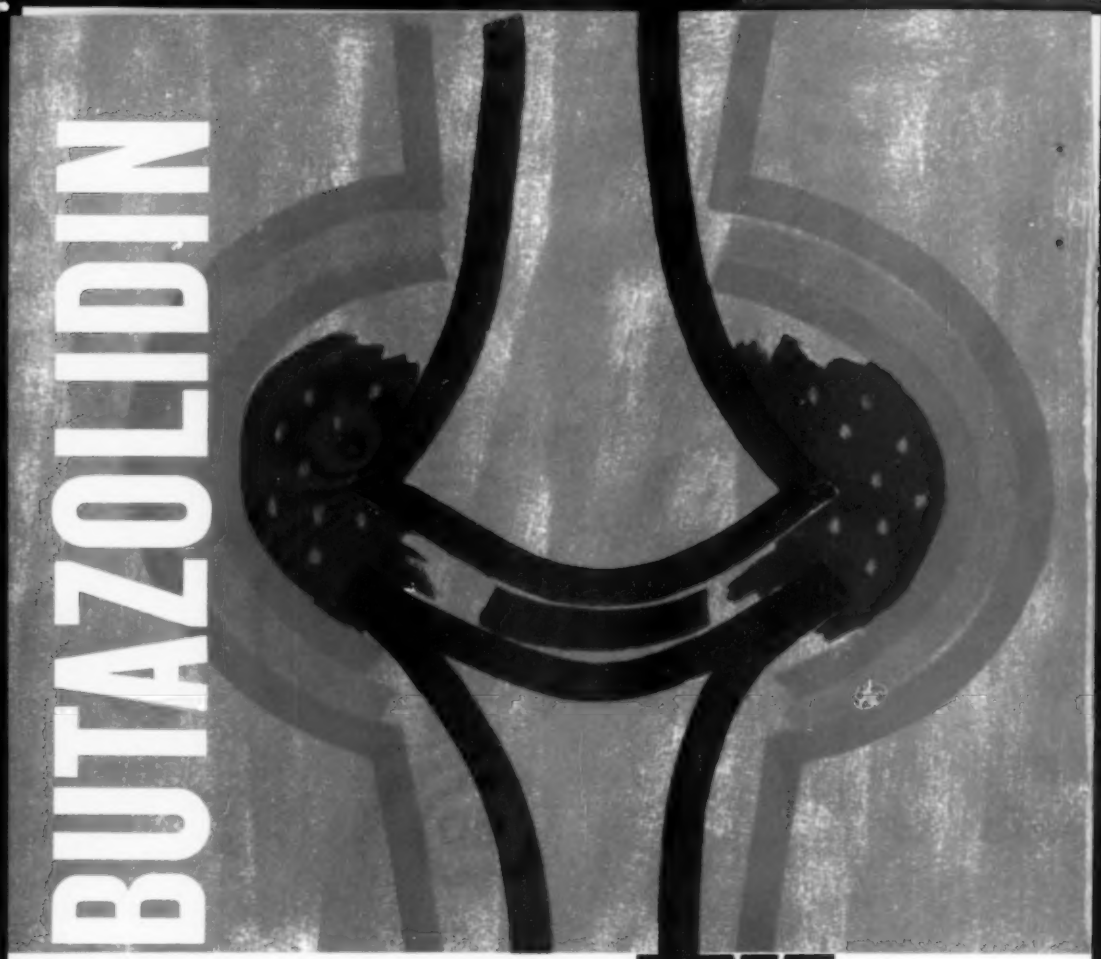
avoids nervous tension and jitters[2]—With PRELUDIN simultaneous sedation is not required.[2]

(1) Golvin, E. P.; McGavack, T. H., and Kenigsberg, S.: Am. J. Digest. Dis. *1*:155, 1956. (2) Natenshon, A. L.: Am. Pract. & Digest Treat. *7*:1456, 1956. (3) Holt, J. O. S., Jr.: Dallas M. J. *42*:97, 1956. (4) Reesler, C.: J.A.M.A. *165*:135 (Sept. 14) 1957.

GEIGY

PRELUDIN® (brand of phenmetrazine hydrochloride). Scored, square, pink tablets of 25 mg. Under license from C. H. Boehringer Sohn, Ingelheim.

original silhouette hand cut by Mochi



sharply reduces disability in arthritis and allied disorders

BUTAZOLIDIN®

(phenylbutazone GEIGY)

nonhormonal • anti-inflammatory • anti-arthritic

In the treatment of arthritis and allied disorders with BUTAZOLIDIN "...decrease in stiffness and muscle spasm, and increased mobility..."[1] are noteworthy features. The improved function is quite often striking in degree ...manifested, for example, in enabling the patient to discontinue the use of crutches[2]...and can usually be maintained for years.[3]

BUTAZOLIDIN being a potent therapeutic agent, physicians unfamiliar with its use are urged to send for detailed literature before instituting therapy.

(1) Toone, E. C., and Irby, R.: South. M. J. **50**:655, 1957. (2) Platoff, G. E.: J. Michigan M. Soc. **52**:980, 1953. (3) Kuzell, W. C., et al.: New England J. Med. **256**:388, 1957.

BUTAZOLIDIN® (phenylbutazone GEIGY): Red coated tablets of 100 mg.

BUTAZOLIDIN® Alka: Capsules containing Butazolidin (phenylbutazone GEIGY) 100 mg.; aluminum hydroxide 100 mg.; magnesium trisilicate 150 mg.; homatropine methylbromide 1.25 mg.

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GEIGY

ARDSLEY, NEW YORK

NEW COUGH MODERATOR

SPECIFIC ANTITUSSIVE...

"COTHERA" moderates intensity and frequency of coughing through a selective action apparently on the medullary cough center ... subdues but does not abolish the cough reflex. The natural reflex for removal of secretions is retained.

ACTS WITHIN MINUTES—LASTS FOR HOURS...

"COTHERA" provides a local anesthetic and soothing demulcent action to induce almost immediate relief of 'sandpaper' throat and 'annoying tickle'... followed by sustained moderation of the cough reflex, lasting for four to six hours and frequently throughout an entire night with one dose.

NON-NARCOTIC...

"COTHERA" is nonaddictive; does not cause respiratory depression, gastric irritation, or constipation. It is well tolerated by children and elderly patients, even after continued use. (Antitussive action is equal to ¼ gr. codeine per teaspoon dose.)

GUARDS AGAINST BRONCHOSPASM...

"COTHERA" exerts a mild musculotropic spasmolytic action tending to protect against possible harmful effects and cough-aggravation of bronchospasm.

CHERRY-FLAVORED...

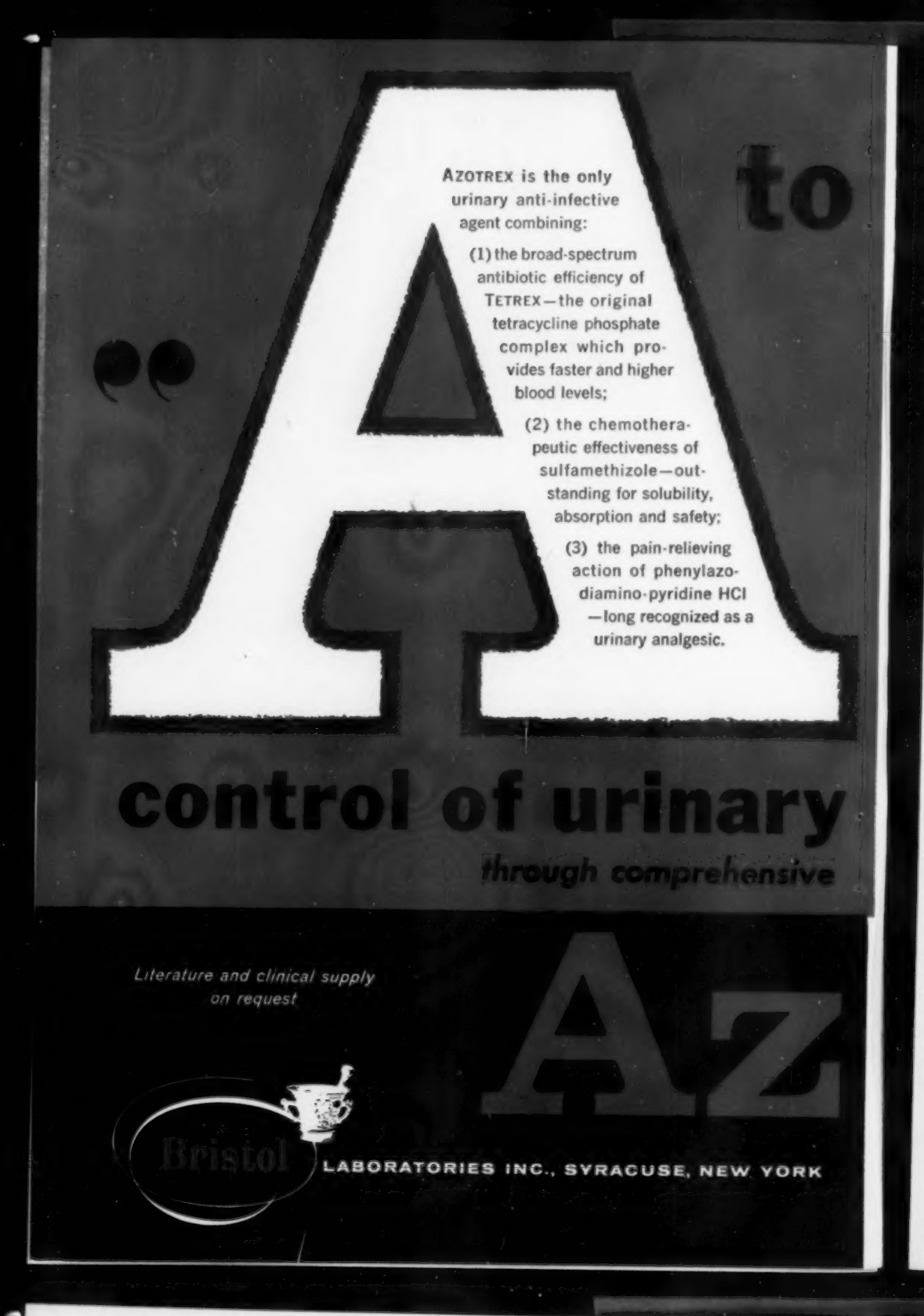
"COTHERA" is completely acceptable to all age groups.

Indications: "COTHERA" Syrup is specifically indicated for irritating, useless, or chronic coughs such as those associated with the common cold, children's diseases, excessive smoking. It may be used safely for short-term or prolonged treatment.

Dosage: Adults and children over 8 years — 1 to 2 teaspoonfuls (25-50 mg.) three or four times daily. Children, 2 to 8 years—½ to 1 teaspoonful three or four times daily.

Supplied: 25 mg. per 5 cc. (teaspoonful), bottles of 16 fluidounces and 1 gallon.

Ayerst Laboratories Ayerst New York 16, N. Y. • Montreal, Canada


to
AZOTREX is the only urinary anti-infective agent combining:
(1) the broad-spectrum antibiotic efficiency of TETREX—the original tetracycline phosphate complex which provides faster and higher blood levels;
(2) the chemotherapeutic effectiveness of sulfamethizole—outstanding for solubility, absorption and safety;
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control of urinary
through comprehensive
Literature and clinical supply on request
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This unique formulation assures faster and more certain control of urinary tract infections, by providing comprehensive effectiveness against whatever sensitive organisms may be involved. Indicated in the treatment of cystitis, urethritis, pyelitis, pyelonephritis, ureteritis and prostatitis due to bacterial infection. Also before and after genitourinary surgery and instrumentation, and for prophylaxis.
In each AZOTREX Capsule:
TETREX (tetracycline phosphate complex)....125 mg.
Sulfamethizole .....250 mg.
Phenylazo-diaminopyridine HCl .....50 mg.
Min. adult dose: 1 cap. q.i.d.
tract infections
tetracycline-sulfonamide-analgesic action
otrex™
CAPSULES

LETTERS TO THE EDITOR

—Concluded from page 65a

ists devoted to psychosomatic medicine, a trend that Dr. Smolen warns about in his fine article (see above). Today we have the general practitioner, who is psychosomatically oriented, and the psychiatrist. Between them they should be able to treat most patients needing the psychosomatic approach.

L.G., M.D.,
Chicago, Ill.

In connection with this trend, Dr. Smolen in his article stated: "Unfortunately . . . we also find that this specific area of knowledge (psychosomatic medicine) seems to be in danger of suffering the same fate as many other areas of medical investigation: That is, when a certain body of fact and theory is sufficiently developed it tends to become compartmentalized, sooner or later dividing itself off from the mainstream of general medical practice and becoming a Specialty. We already have a Journal and an Association in the field of psychosomatic medicine . . ."

—Ed.

Thank You

As a regular reader, I want to commend you for the consistently high quality of MEDICAL TIMES. Its practical scientific information makes it very useful to me in my practice. I refer to articles such as "Intrinsic Causes of Shoulder Pain" which appeared in the February, 1958, issue.

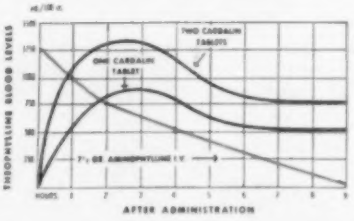
A.J., M.D.
Los Angeles, Calif.

Orally... higher and more sustained aminophylline blood levels than those produced intravenously

Cardalin utilizes two synergistic protective factors to permit administration of high oral doses of aminophylline without the usual side effects of nausea, gastric irritation and vomiting.

CARDALIN

... proven effective clinically whenever high blood concentrations of aminophylline are desired ... as in congestive heart failure, cardiac edema, paroxysmal dypsnea, angina pectoris, myocardial infarction, heart block and bronchial asthma.

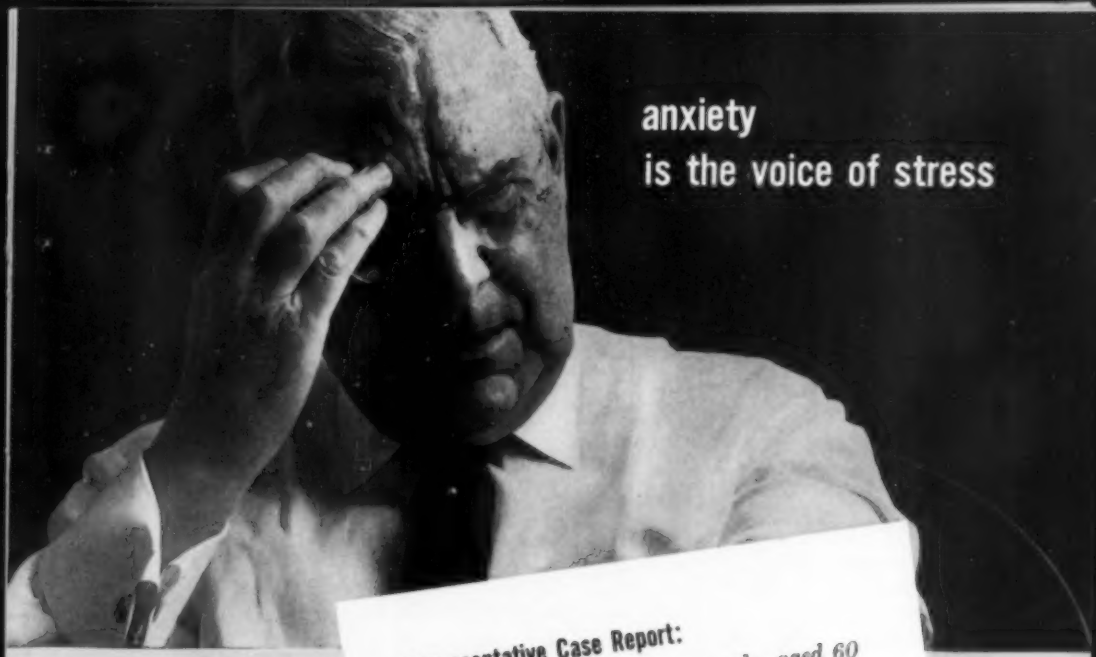


(Adapted from Bickerman, H. A., *et al.*: Ann. Allergy 11:301, 1953, and Truitt, E. B., Jr., *et al.*: J. Pharmacol. & Exper. Therap. 100:309, 1950.)

Each Cardalin tablet supplies: Aminophylline, 5.0 gr.; Aluminum hydroxide, 2.5 gr.; Ethyl aminobenzoate, 0.5 gr.

Also available, Cardalin-Phen.

Neisler Irwin, Neisler & Co. • Decatur, Illinois



anxiety
is the voice of stress

Representative Case Report:
L.A., male, aged 60

Hypertension of long duration, complicated by anxiety, nervousness, insomnia, headache, palpitations, and typical hypertensive discomfort. To manage the emotional component, EQUANIL was given as an adjunct to specific antihypertensive treatment. Symptoms of hypertension and emotional tension have been significantly relieved. The combined therapy continues, and blood pressure is now maintained at nearly normal levels.

hypertension is a state of stress

EQUANIL
Meprobamate
PHENERGAN® HCl
Promethazine HCl
SPARINE® HCl
Promazine HCl

A Wyeth normotropic drug for nearly every patient under stress

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Equanil
Meprobamate

Relieves tension—mental and muscular

NEW
TOPICAL
DIMENSIONS
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Antiinflammatory
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INCORPORATED IN EXCLUSIVE ACID MANTLE® VEHICLE

pH 5.0

Creme
COR-TAR-QUIN™

ACID MANTLE® · hydrocortisone · stainless tar · diiodohydroxyquinoline

In subacute and chronic dermatoses, "especially where an inflammatory reaction was accompanied by increased scaling and lichenification with secondary infection such as is seen in seborrheic dermatitis, atopic dermatitis, contact dermatitis, and neurodermatitis."

—Rein, C. R., and Fleischmajer, R.: Personal Communication.



Sig: Apply b. i. d.
½ oz., 1 oz., 2 oz., & 4 oz. tubes either 0.5% or 1.0% hydrocortisone.

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ACHROCIDIN*

TETRACYCLINE-ANTIHISTAMINE-ANALGESIC COMPOUND LEDERLE

A versatile, well-balanced formula capable of modifying the course of common upper respiratory infections . . . particularly valuable during respiratory epidemics; when bacterial complications are likely; when patient's history is positive for recurrent otitis, pulmonary, nephritic, or rheumatic involvement.

Adult dosage for ACHROCIDIN Tablets and new caffeine-free ACHROCIDIN Syrup is two tablets or teaspoonfuls of syrup three or four times daily. Dosage for children according to weight and age.

Available on prescription only.

TABLETS *(sugar coated) Each Tablet contains:*

ACHROMYCIN® Tetracycline	125 mg.
Phenacetin	120 mg.
Caffeine	30 mg.
Salicylamide	150 mg.
Chlorothen Citrate	25 mg.

Bottles of 24 and 100.

SYRUP *(lemon-lime flavored) Each teaspoonful (5 cc.) contains:*

ACHROMYCIN® Tetracycline equivalent to tetracycline HCl	125 mg.
Phenacetin	120 mg.
Salicylamide	150 mg.
Ascorbic Acid (C)	25 mg.
Pyrilamine Maleate	15 mg.
Methylparaben	4 mg.
Propylparaben	1 mg.

Bottle of 4 oz.



rapidly relieves the . . . . . debilitating symptoms

LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY
PEARL RIVER, NEW YORK

*Trademark



an advanced method of theophylline therapy

CLYSMATHANE

(FLEET)

Disposable Rectal Unit

simple... safe... effective...

For the alleviation of symptoms in bronchial asthma and the acute episodes of heart failure, CLYSMATHANE (Fleet) supplies prompt therapeutically adequate blood levels of theophylline.[1]

Even after repeated dosage CLYSMATHANE (Fleet) minimizes the side effects often associated with oral or parenteral theophylline administration. The plastic squeeze bottle (with attached, prelubricated, non-traumatic rectal tube) is designed for self-administration.

Dosage: One CLYSMATHANE (Fleet) Unit as a retention enema before retiring or as directed. Available on prescription at professional pharmacies.

Composition: Theophylline monoethanolamine (Theamin, Fleet) 0.625 Gm. aqua 37.0 ml. in rectal dispenser. Units packed in individual cartons, manufacturer's label readily removable.



REFERENCE: (1) Ridolfo, A. S. & Kohlstaedt, K. G., "A simplified method for the rectal instillation of theophylline"—to be published

CLYSMATHANE

(FLEET)

Disposable Rectal Unit

since 1869 Fleet

Professional Samples and literature on request

C. B. FLEET CO., INC.

Lynchburg, Virginia

Mediquiz

These questions are from a civil service examination recently given to candidates for physician appointments in municipal government. Like to see how you would fare? Answers will be found on page 86a.

1. The drug of choice in the treatment of ascariasis is: (A) santonin; (B) hexylresorcinol; (C) tetrachloroethylene; (4) oil of chenopodium.

2. A man falls astride an obstruction receiving injury to the perineum. Subsequently he is unable to void, his temperature is elevated and there is a gradual increased swelling of the perineum and genitalia. The most likely injury is: (A) contusion and hemorrhage of perineal muscles; (B) hematocele of the scrotum; (C) rupture of the urethra; (D) rupture of the bladder.

3. A 36 year old man complains of attacks of palpitation at night. These are accompanied by dyspnea and epigastric and lower chest discomfort. The only method of relieving these symptoms has been for him to stand up and walk about the room. Fluoroscopic examination with barium swallow reveals the stomach bubble high in the left chest. Of the following, the most likely cause of the attacks is: (A) arteriosclerotic heart disease with left ventricular failure; (B) duodenal ulcer; (C) hiatus hernia; (D) gall bladder disease.

4. A 64 year old male with chronic pulmonary emphysema is admitted with acute pneumonia, is deeply cyanotic, and is immediately placed in an oxygen tent. He is maintained in a high oxygen atmosphere continously for four days, at which time he is noted to go gradually into coma with a respiratory rate of 6 per minute, and to become increasingly cyanotic. The carbon dioxide content of the arterial blood was found to be 90 volumes per cent. Correct treatment for this man is: (A) Administration of caffeine sodium benzoate; (B) immediate removal from the oxygen tent and the use of intermittent oxygen only; (C) increase in penicillin dosage; (D) administration of aureomycin.

5. Cortisone as treatment for rheumatoid arthritis: (A) should be routinely used; (B) cannot be dangerous; (C) should never be used; (D) should be beneficial in some cases.

—Continued on page 80a

B-P

Here it is STERILE *Rib-Back* BLADE

in the PUNCTURE PROOF Package



It's Sharp

Naturally, it can be AUTOCLAVED

Don't compromise package safety or blade quality. The B-P STERILE Rib-Back BLADE package provides both—on the outside an easily opened PUNCTURE PROOF envelope that can be autoclaved if desired . . . on the inside a STERILE Rib-Back BLADE of the same superior carbon steel you have always enjoyed.

CARBON steel—the BEST for FINE cutting edges

After all, the first consideration is cutting efficiency no matter how the blade is packaged—and cutting efficiency is exactly what you get with the 'only' B-P Rib-Back Surgical Blade, whether your preference in packaging be . . .

B-P STERILE pack Rib-Back BLADES
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Ask your dealer

BARD-PARKER COMPANY, INC.
Danbury, Connecticut

BARD-PARKER RIB-BACK BLADES — ALWAYS YOUR BEST BUY IN PERFORMANCE
SUPPLIED IN THE PACKAGE TO MEET YOUR REQUIREMENTS



You can control tremor

In parkinsonism Parsidol has proved outstandingly effective for controlling tremor and muscular rigidity, the principal impairments in this disease.[1, 2]

With Parsidol most patients show rapid, even dramatic improvement—both in major symptoms and in gait, posture, balance and speech. Side effects are minimal. Parsidol is compatible with all other antiparkinsonian drugs and its effectiveness may even be increased in combination or rotation with such preparations as atropine and dextroamphetamine.[3] Parsidol improves the patient's emotional perspective, promotes a more optimistic outlook as physical coordination and dexterity return.

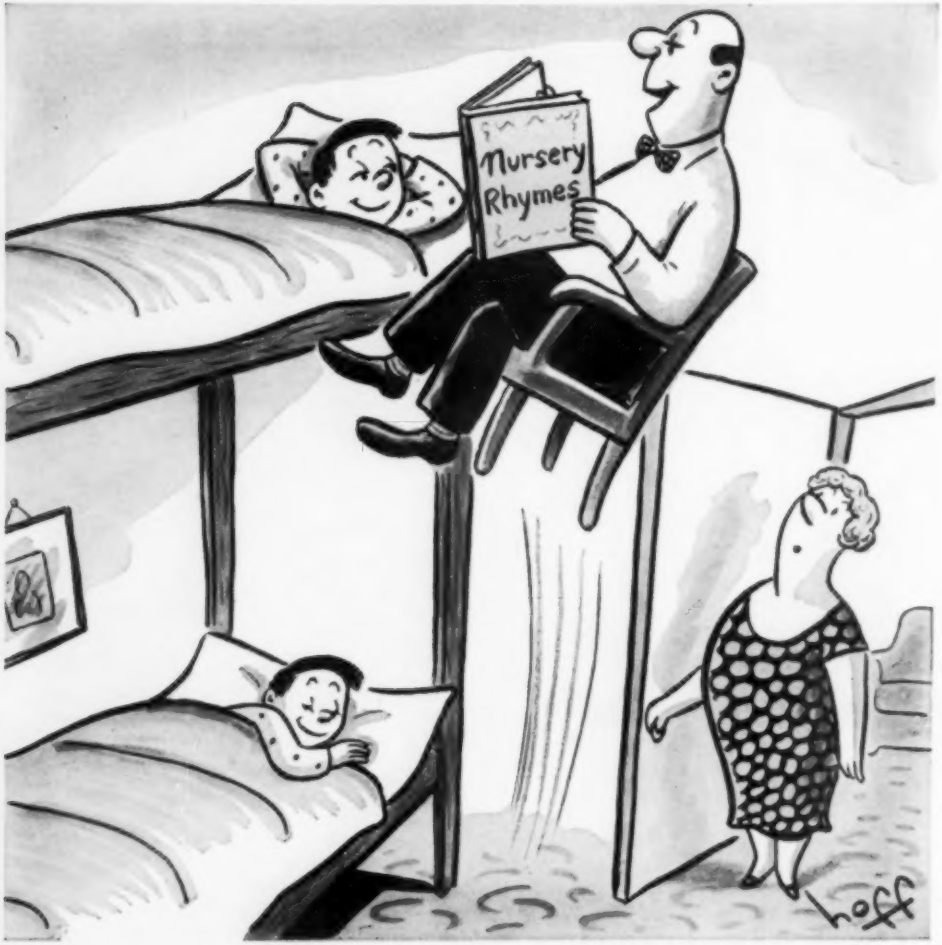
Most patients can be controlled with a maintenance dosage of 50 mg. four times daily. However, more severe cases may require up to 600 mg. daily, a dosage level ordinarily well tolerated.

References: 1. Doshay, L. J.; Constable, K. and Agate, F. J., Jr.: J.A.M.A. *160*:348 (Feb.) 1956. 2. Berris, H.: J.-Lancet *74*:245 (July) 1954. 3. Timberlake, W. H. and Schwab, R. S.: N. Eng. J. Med. *247*:98 (July 17) 1952.

PARSIDOL®

Brand of ethopropazine hydrochloride

WARNER-CHILCOTT



Give your patient that extra lift with "Beminal" Forte

Help speed recovery in surgical patients or when high B and C levels are needed

new
improved formula **"BEMINAL" Forte with Vitamin C**

An increase in vitamin C content from 150 mg. to 250 mg. plus massive doses of B factors provide a truly high B and C formula to speed the process of tissue repair.

Supplied: No. 817 — Bottles of 100 and 1,000 capsules

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RIASOL *Quick* relief in PSORIASIS



Before Use of Riasol

RIASOL* relieves itching. In a matter of weeks the scaliness disappears and the red patches gradually fade away. With continued treatment, recurrence is usually avoided.

Medical statistics as of 1958 show benefit in 97% of cases treated with RIASOL, relief of itching in 94%, removal of scales in 91%, fading of erythema in 82%, and great reduction of recurrences.

RIASOL is a unique formulation containing 0.45% mercury chemically combined with soaps for penetrative action, 0.5% phenol as an antipruritic, and 0.75% cresol as an antiseptic detergent, in a washable, non-staining, odorless base.

Best results are obtained by daily applications after a mild soap bath with thorough drying. Only a thin, invisible, economical film is needed. No bandages required. Adjust to patient's progress after one week.

All druggists carry RIASOL or can readily procure it. Ethically promoted. Supplied in 4 and 8 fld. oz. bottles.



After Use of Riasol

* T.M. Reg. U.S. Pat. Off.



Test RIASOL Yourself

May we send you professional literature and generous clinical package of RIASOL. No obligation. Write

SHIELD LABORATORIES

Dept. MT-458 12850 Mansfield Avenue, Detroit 27, Michigan

RIASOL FOR PSORIASIS

—Continued from page 75a

6. Of the following, the best agent in the treatment of faucial diphtheria is: (A) streptomycin; (B) diphtheria antitoxin; (C) penicillin; (D) sulfadiazine.

7. The one of the following diseases which is least likely to be confused with acute cholecystitis in a 40-year old man is: (A) mesenteric adenitis; (B) pancreatitis; (C) right lower lobe pneumonia; (D) myocardial infarction.

8. Of the following diseases, the one for which there exists an effective method of active immunization is (A) bacillary dysentery; (B) measles; (C) malaria; (D) yellow fever.

9. The one of the following findings which would be an indication of failure of medical management of a duodenal peptic ulcer is: (A) repeated recurrence of pain when antiacid therapy is withdrawn; (B) recurrence of subjective symptoms of ulcer under severe stress; (C) gastric dilation with delayed emptying; (D) persistent fasting hyperacidity.

10. The one of the following which is the most appropriate drug for the treatment of acute gouty arthritis in the early state is: (A) liver extract; (B) penicillin; (C) colchicine; (D) alcohol.

11. The characteristic murmur of aortic insufficiency is: (A) lowpitched and rumbling; (B) highpitched and blowing; (C) heard best with the patient supine; (D) heard best at the apex.

12. Urobilinogen in the urine is most likely to be absent in: (A) cirrhosis of the liver; (B) acute yellow atrophy of the liver; (C) adenocarcinoma of ampulla of Vater; (D) gallstone in cystic duct.

13. Rheumatic fever in a susceptible population is most likely to occur following an outbreak of: (A) influenza; (B) scarlet fever; (C) the common cold; (D) meningitis.

14. A stocky laborer feels sharp pain in his right shoulder as he is lifting a heavy crate. On examination, patient has moderate pain and soreness in the right shoulder and is unable to abduct the arm more than 15°. The shoulder can be moved passively through most of the normal range. The most likely diagnosis is: (A) impacted fracture of neck of humerus; (B) acute subdeltoid bursitis; (C) rupture of the long head of the biceps; (D) rupture of the supraspinatus tendon.

15. The proper treatment of the patient described in Question 14 is: (A) baking and massage; (B) immobilization in a Velpeau's bandage; (C) support of arm on airplane splint; (D) exploratory operation and repair of injured structures.

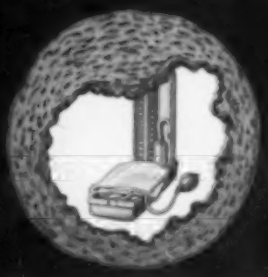
16. The etiology of arteriosclerosis obliterans is: (A) unknown; (B) metabolic; (C) infectious; (D) mechanical.

17. In treating phlebitis; anticoagulant therapy is contra-indicated in: (A)

—Concluded on page 86a

IN HYPERTENSION

Blood Cholesterol Regulation Is Desirable



Patients with hypertension develop atherosclerosis more rapidly and at a younger age than people with normal blood pressure.[1] It is also known that clinical hypercholesteremia is associated with increased atherosclerosis[2] and that many hypertensives show elevated cholesterol levels.[3] For example, in one study including 120 patients with high blood pressure, hypercholesteremia was found in 44% of the hypertensive group.[3]

The consensus of opinion today is that elevated cholesterol levels should be reduced or prevented, and it has been amply demonstrated that this can be done very well by adding linoleic acid and vitamin B_6 to the diet. In scores of patients with hypercholesteremia, and particularly in patients with vascular disease, diets high in linoleic acid produced improvement.[4,5] Vitamin B_6 is apparently necessary to convert linoleic acid into the primary essential fatty acid, arachidonic acid. Thus the body is dependent on an intake of both linoleic acid and vitamin B_6 for normal cholesterol levels.[6,7]

This is why ARCOFAC (Armour Cholesterol Lowering Factor) provides *both* linoleic acid and vitamin B_6 in adequate amounts. As little as one dose a day lowers high blood cholesterol while allowing the patient to eat a balanced, nutritious and palatable diet.

Each tablespoonful (15 ml.) of Arcofac emulsion contains:
Essential fatty acids† ..... 6.8 Gm.
(measured as linoleic) with 2.5 I.U. of Vitamin E*
Pyridoxine hydrochloride (Vitamin B_6) ... 0.6 mg.

† Derived from safflower oil which contains the highest concentration of unsaturated fatty acids of any commercially available vegetable oil.

* Added as Mixed Tocopherols Concentrate, N.F.

References 1-7 from the 1956-57 literature supplied on request.

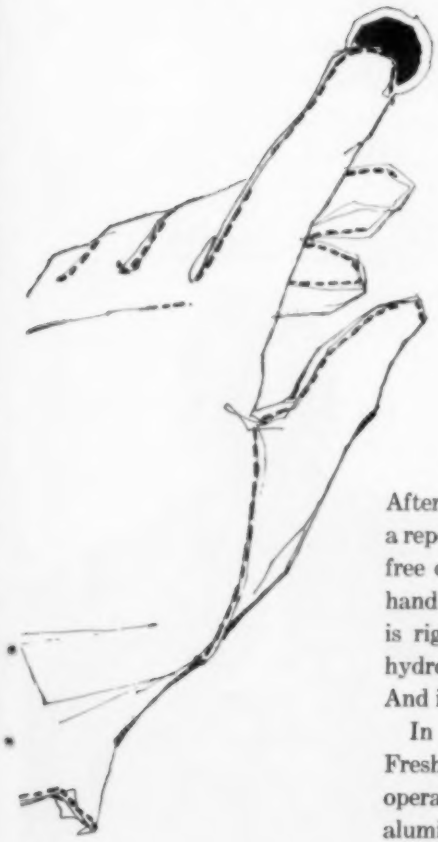
Arcofac

Armour Cholesterol Lowering Factor

THE ARMOUR LABORATORIES
A DIVISION OF ARMOUR AND COMPANY · KANKAKEE, ILLINOIS


GROUP 4 ANTIHISTAMINE
"THERUHISTIN"
CHALLENGES COMPARISON
ON ALL COUNTS...
1 HIGH POTENCY
92% effective in 602 cases!
2 LOW SEDATION
99% free of drowsiness!
3 WIDE RANGE
effective in allergic respiratory
and topical allergies!
4 LOW DOSAGE
average daily dosage 8 mg.
in 602 patients!
5 NO TOXICITY
no report of toxic effects
in 2,686 cases!
6 LESS RESTRICTIVE
negligible limitation against patients
driving or operating machinery
Group 4 "THERUHISTIN" is unmatched by
antihistamines in Group 1 (low potency/low
sedation), Group 2 (moderate potency/moderate
sedation), Group 3 (high potency/high sedation).
Supplied:
"THERUHISTIN" Tablets, 4 mg., bottles of
Syrup, 2 mg. per 5 cc. (tsp.), bottles of
Dosage: Adults, 1 tablet or 2 teaspoonfuls, 3 or
four times daily. Children, ½ to 1 teaspoonful, or ½ to
tablet (1 to 2 mg.) two to four times daily.
"THERUHISTIN"-S.A. Sustained Action Tablets (up to 12
hour control with one tablet), 12 mg. per tablet, bottles
of 100 and 1,000. Dosage: 1 tablet on arising, repeat every
8-12 hours as necessary.
1. New and Unused Therapeutics Committee, Am.
Interim Report at Thirteenth Annual Congress, Mar. 20-22, 1957,
Chicago, Ill., Ann. Allergy, to be published. 2. von Schmidtgen, A.,
Arzneimittel-Forsch. 7:237 (Apr.) 1957. 3. Spiesman, A. B.,
New York J. Med. 57:3329 (Oct. 15) 1957.
ASYMPTOMATIC
ALERT
HIGH POTENCY
LOW SEDATION
AYERST LABORATORIES

RING BELL
AND
WALK IN



She returns to report . . .

full antacid benefits

–no antacid penalties

After you prescribe ALUDROX, you can expect to enter such a report as this in your follow-up record: "Acid neutralization free of drawbacks." For ALUDROX avoids systemic or other handicaps. It avoids laxation (its content of milk of magnesia is right). It avoids constipation (its content of aluminum hydroxide is right). It avoids alkalosis. It avoids acid rebound. And it solves the problem of taste resistance.

In short, ALUDROX outmodes trouble-making antacids. Fresh-flavored, smooth-textured, it encourages patient co-operation. Its formula (one part milk of magnesia, four parts aluminum hydroxide) is the choice of many physicians for fast and prolonged acid neutralization, constipation-inhibiting action, and soothing protection. ALUDROX keeps antacid trouble out of your practice.

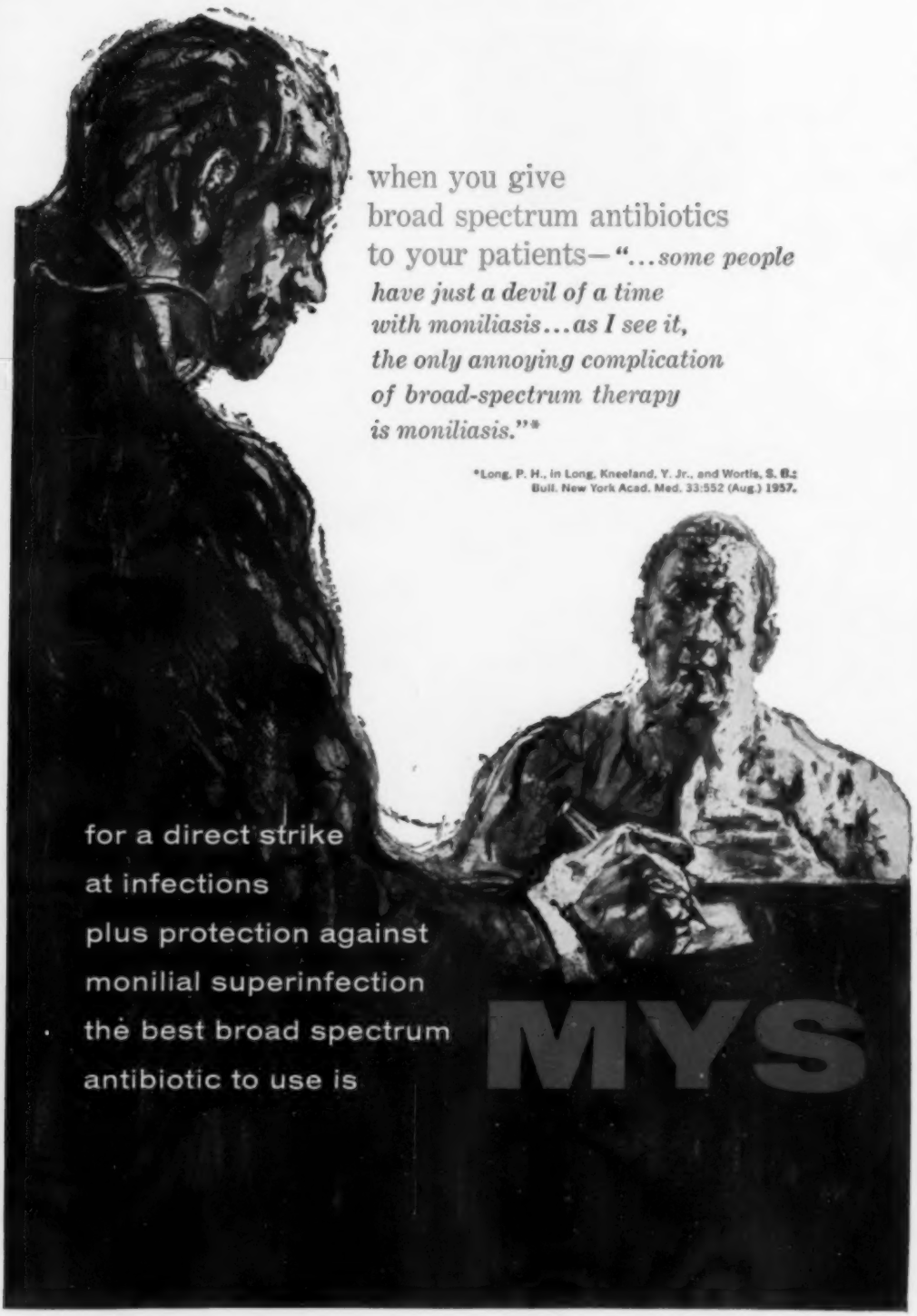
TABLETS SUSPENSION

ALUDROX®

Aluminum Hydroxide with Magnesium Hydroxide

to neutralize.
not penalize

Wyeth
Philadelphia 1, Pa.


when you give
broad spectrum antibiotics
to your patients—"...some people
have just a devil of a time
with moniliasis...as I see it,
the only annoying complication
of broad-spectrum therapy
is moniliasis."*
*Long, P. H., in Long, Kneeland, Y. Jr., and Wortis, S. B.:
Bull. New York Acad. Med. 33:552 (Aug.) 1957.
for a direct strike
at infections
plus protection against
monilial superinfection
the best broad spectrum
antibiotic to use is
MYS

THESE ARE YOUR PATIENTS WHO MAY HAVE "JUST A DEVIL OF A TIME WITH MONILIASIS"

- debilitated patients
- elderly patients
- diabetics
- infants, especially prematures
- those who developed moniliasis on previous broad spectrum therapy
- patients on prolonged and/or high dosage antibiotic therapy
- women, especially when pregnant or diabetic

Mysteclin-V provides you with a dosage form for every clinical need:

	Tetracycline phosphate complex equiv. tetracycline HCl (mg.)	Mycostatin (units)	Packaging
Capsules (per capsule)	250	250,000	Bottles of 16 and 100
Half-Strength Capsules (per capsule)	125	125,000	Bottles of 16 and 100
Suspension (per 5 cc.)	125	125,000	60 cc. bottles
Drops (per cc.—20 drops)	100	100,000	10 cc. dropper bottles

SQUIBB CENTENNIAL 1858 1958 SQUIBB QUALITY—THE PRICELESS INGREDIENT

TECLIN-V

Tetracycline Phosphate Complex (Sumycin) and Nystatin (Mycostatin)

1. Mysteclin-V contains Sumycin — Squibb Tetracycline Phosphate Complex—for faster, higher initial blood levels . . . for more rapid transport of more tetracycline to the site of the infection.
2. Mysteclin-V contains Mycostatin—the first safe antifungal antibiotic —to protect patients against complicating monilial overgrowth.
3. For practical purposes, Mysteclin-V is sodium-free.

'MYSTECLIN'®, 'SUMYCIN'® AND 'MYCOSTATIN'® ARE SQUIBB TRADEMARKS

—Concluded from page 80a

the presence of a fracture of long bone; (B) the first two weeks following the operation; (C) cerebral hemorrhage; (D) pulmonary infection.

18. The etiology of Raynaud's disease is: (A) inflammatory; (B) neoplastic; (C) functional.

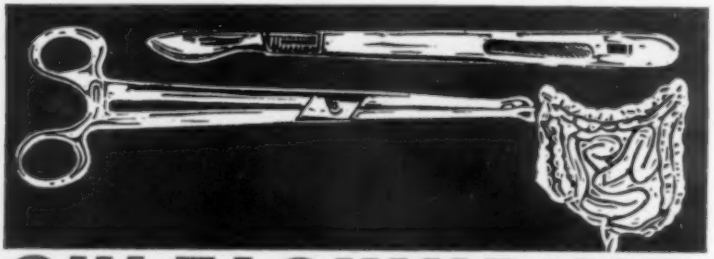
19. Hyperuricemia exists in gouty patients; (A) always; (B) never; (C) usually; (D) rarely.

20. The joint pathology most characteristic of rheumatoid arthritis is: (A) cartilage degeneration; (B) inflammation of the synovium and joint capsule; (C) eburnation of subchondral bone; (D) osteophytic proliferation.

21. A convulsion following olfactory hallucinations suggests: (A) an intranasal tumor extending intracranially; (B) a lesion of both olfactory bulbs; (C) a lesion of one olfactory bulb; (D) a temporal lobe lesion.

"MEDIQUIZ" ANSWERS

1(B), 2(C), 3(C), 4(B), 5(D), 6(B), 7(A), 8(D), 9(C), 10(C), 11(B), 12(C), 13(B), 14(D), 15(D), 16(A), 17(C), 18(C), 19(C), 20(B), 21 (D).



SULFASUXIDINE®

SUCCINYLSULFATHIAZOLE

A "STANDARD" IN BOWEL SURGERY

Many years of widespread use have demonstrated the importance of SULFASUXIDINE in bowel surgery. It minimizes the danger of infection by producing a low bacterial count in the gut and reduces incidence of flatulence. Normal healing is encouraged.

Available as 0.5 Gm. tablets in bottles of 100 and 1000; powder form in 1-pound bottles.

Sulfasuxidine is a trade-mark of Merck & Co., Inc.

MSD MERCK SHARP & DOHME

DIVISION OF MERCK & CO., Inc., PHILADELPHIA 1, PA.



PRE-MICRONIZATION assures particle size for maximum effectiveness

Medihaler-EPI® For quick relief of bronchospasm of any origin. More rapid than injected epinephrine in acute allergic attacks.

Epinephrine bitartrate, 7.0 mg. per cc., suspended in inert, nontoxic aerosol vehicle. Contains no alcohol. Each measured dose 0.15 mg. free epinephrine.

Medihaler-ISO® Unsurpassed for rapid relief of symptoms of asthma and emphysema.

Isoproterenol sulfate, 2.0 mg. per cc., suspended in inert, nontoxic aerosol vehicle. Contains no alcohol. Each measured dose 0.06 mg. free isoproterenol.

MEDIHALER® *For Ample Air Right Now!*

Millions of asthmatic attacks have been aborted faster, more effectively, more economically with Medihaler-Epi and Medihaler-Iso. Automatically measured dosage and true nebulization...nothing to pour or measure...One inhalation usually gives prompt relief.

Prescribe Medihaler medication with Oral Adapter as first prescription. Refills available without Oral Adapter.

The Medihaler Principle of automatically measured-dose aerosol medications in spillproof, leakproof, shatterproof, vest-pocket size dispensers also available in Medihaler-Phen® (phenylephrine, hydrocortisone, phenylpropanolamine, neomycin) for prompt, lasting relief of nasal congestion.

Riker LOS ANGELES

PSORIASIS



Proved Clinically Effective Oral Therapy—

maintenance regimen may keep patients lesion-free.

COMPLETE LITERATURE AND REPRINTS
UPON REQUEST. JUST SEND AN Rx BLANK.

LIPAN®

LIPAN Capsules contain: Specially prepared highly activated, desiccated and defatted *whole* Pancreas: Thiamin HCl, 1.5 mg. Vitamin D, 500 I.U.

Available: Bottles 180's, 500's.

Spirt & Co., Inc.

WATERBURY, CONN.

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with AUTRINIC*

INTRINSIC FACTOR CONCENTRATE WITH B_{12}

FALVIN FEATURES AUTRINIC—the new, highly active Intrinsic Factor Concentrate that promotes intestinal absorption of Vitamin B_{12}, resulting in serum B_{12} levels significantly higher than those obtained with Intrinsic Factors now in common use or Vitamin B_{12} alone

HIGHER SERUM B_{12} LEVELS FOR A BETTER PATTERN OF RESPONSE IN ANTI-ANEMIA THERAPY

THERAPEUTIC for anemia due to deficiency of recognized hemopoietic elements
SUPPORTIVE where anemia is associated with other pathology
PROPHYLACTIC in marginal deficiency states which may predispose to clinically overt anemia

Each capsule contains:

Vitamin B_{12} with Autrinic* Intrinsic Factor Concentrate	1 U.S.P. Oral Unit
Ferrous Sulfate Exsiccated	300 mg.
Ascorbic Acid (C)	75 mg.
Folic Acid	1 mg.

Dosage: Two Capsules Daily

FALVIN WITH AUTRINIC—INTRINSICALLY BETTER IN ANEMIA

*Reg. U. S. Pat. Off.

Lederle LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, N. Y.



GET YOUR BABIES OFF TO A STRONG START WITH

Baker's

MODIFIED MILK

A complete formula in liquid and powder form prepared exclusively from Grade A Milk

Happy Jeanette, aglow with health, is a Baker's Blue Ribbon Baby.

Doctor, your dietary decision can build *Blue Ribbon* babies. The baby who wins the blue ribbon is the one whose doctor—no one else—selects its formula.

BAKER'S MODIFIED MILK BUILDS BLUE RIBBON BABIES

- A complete, balanced uniform formula.
- Convenient and easy to prepare—simply add water.
- Made from milk of outstanding purity.
- Provides adequate amounts of all known essential vitamins plus much-needed iron.
- Butterfat replaced by easily digested vegetable oils.
- Twice homogenized for better digestion and absorption.
- Helps doctor control infant's formula longer. Advertised to the medical profession only.
- Economical to use—eliminates need for additional vitamins and iron.

FURNISHED GRATIS TO HOSPITALS FOR NURSERY USE

Available in drug stores

OTHER PRODUCTS—VARAMEL—a scientifically formulated evaporated milk product prepared exclusively from Grade A Milk

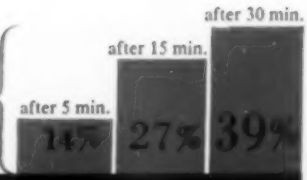


Normal Dilutions
Liquid Form—1 fl. oz. milk to 1 fl. oz. water
Powder Form—1 Tbsp. powder to 2 fl. oz. water
20 calories per ounce

THE Baker LABORATORIES, INC. · Cleveland 3, Ohio

Milk Products Exclusively for the Medical Profession

Progressive increases in vital capacity following a single oral dose of five tablespoonfuls of Elixophyllin. (Average increase in 30 minutes – 807 cc.)*



AIR HUNGER in ASTHMA



Average vital capacity of 20 patients in acute asthmatic attack was 2088 cc. before treatment.*

*Spielman, D.: Ann. Allergy 15:270, 1957.

RELIEVED IN MINUTES BY ORAL DOSAGE...

74% of severe attacks terminated by oral medication

Fifty unselected patients admitted for emergency room treatment of severe acute asthmatic attacks were given 75 cc. Elixophyllin *orally* instead of intravenous aminophylline. Of these, 37 (74%) were completely relieved and discharged without further treatment—9 responded to additional therapy—4 were hospitalized as status asthmaticus cases.

– Schluger, J., et al.: Am. J. M. Sci. 234:28, 1957.

Each tbsp. (15 cc.) contains: THEOPHYLLINE 80 mg., ALCOHOL 3 cc.
Bottles of 16 fl. oz. available at prescription pharmacies – Rx only.

ELIXOPHYLLIN

Gastric intolerance rarely encountered.

Literature upon request

Sherman Laboratories
Detroit 11, Michigan

MODERN MEDICINALS

These brief résumés of essential information on the newer medicinals, which are not yet listed in the various reference books, can be pasted on file cards and a record kept. This file can be kept by the physician for ready reference.

Compazine, Smith, Kline & French Laboratories, Philadelphia, Pennsylvania. Spansule in new dosage form of 30 mg. Indicated as a tranquilizer in a range of emotional disturbances. *Dose:* As directed by physician. *Sup:* 10 mg., 15 mg., and 30 mg. spansules in bottles of 30 and 250.

Cosa-Tetracyn, Pfizer Laboratories, Division of Chas. Pfizer & Co., Inc., Brooklyn, New York. Capsules, each containing 125 mg. or 250 mg. tetracycline hydrochloride with glucosamine. Indicated for infections caused by gram-positive and gram-negative bacteria, rickettsiae, certain spirochetes, large viruses and protozoa. *Dose:* As directed by physician. *Sup:* 125 mg. in bottles of 25 and 100; and 250 mg. in bottles of 16 and 100.

Cyclamycin, Wyeth Laboratories, Inc., Philadelphia, Pennsylvania. Triacetyloleandomycin, a new antibiotic derivative that effectively combats many infections resistant to erythromycin, the tetracyclines, penicillin and streptomycin. Indicated for pneumococcal and streptococcal pneumonia, and pneumonia caused by Haemophilus influenzae; urinary tract infections, pharyngitis, infected cysts, impetigo, infected ulcers, furuncles, carbuncles and cellulitis. *Dose:* Adults; 250 mg. to 500 mg. q.i.d. depending upon severity of infection. Children; According to age and severity of infection. *Sup:* Capsules, 125 mg. and 250 mg., bottles of 36.

Emdee Margarine, Pitman-Moore Company, Division of Allied Laboratories, Inc. Specially prepared for persons requiring a restricted intake of cholesterol-producing fats. Corn oil, and hardened coconut oil; pasteurized fat-free milk; salt; lecithin; mono and diglycerides. Each two ounces provide 62% minimum daily requirements of Vitamin A and D for a child; 47% of Vitamin A and 62% of Vitamin D for an adult. *Sup:* Containers of 1 lb.

Furoxone, Eaton Laboratories, Norwich, New York. Tablets, each containing 100 mg. furazolidone. Indicated in enteric infections. *Dose:* Adults, 1 tablet four times a day; children as directed by physician. *Sup:* Bottles of 20 and 100.

Lowila Emollient, Westwood Phar-

—Continued on page 96a

anginaphobia: *must anger cause angina?*

Fear of anginal attack may cause a patient to simmer in repressed hostility – potentially as harmful as blowing off steam.

Remove the fear factor by lowering the anginal attack rate. Peritrate, a long-acting coronary vasodilator, reduces the frequency and severity of attacks, lessens nitroglycerin dependence, increases exercise tolerance.

For the unduly apprehensive patient (especially early in treatment), Peritrate with Phenobarbital relieves tension without daytime drowsiness.

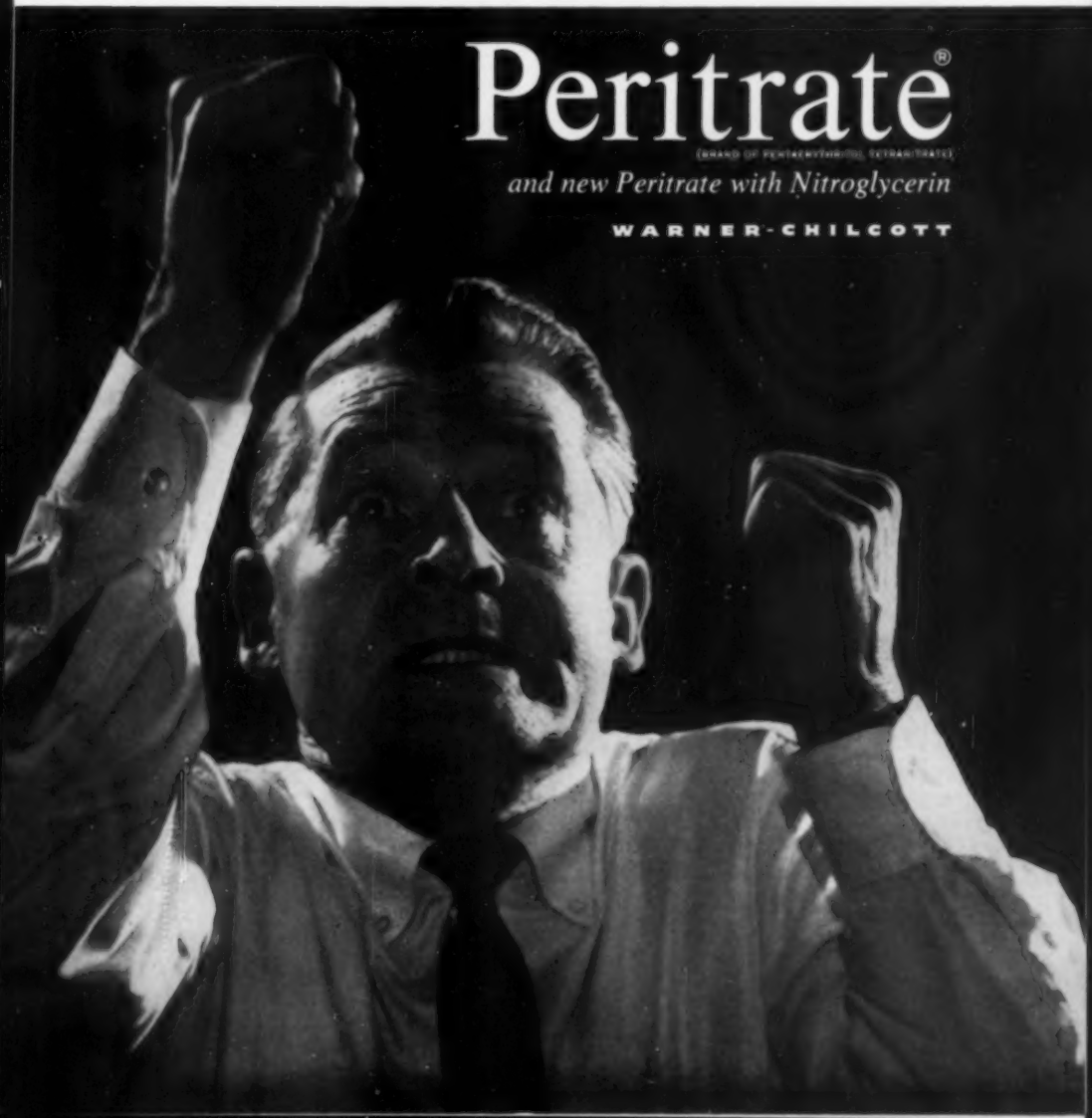
Usual dosage: 20 mg. of Peritrate before meals and at bedtime.

Peritrate®

(BRAND OF PENTAERYTHRITOL TETRANITRATE)

and new Peritrate with Nitroglycerin

WARNER-CHILCOTT



Keep a tube of TASHAN® handy—



It works wonders in dry, scaly skin, chafing, chapping, detergent rash, diaper rash, intertrigo, simple eczema, minor burns, excoriation, superficial ulcers and fissures.

ANTIPRURIENT · SOOTHING · HEALING

Contains vitamins A, D, E, and *d*-panthenol in a water-miscible, non-sensitizing base.

Roche—Reg. U. S. Pat Off.

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc
Nutley, New Jersey

NEW

Get this compact, convenient D & G EMERGENCY SUTURE PACK for bag or office



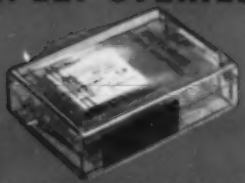
REVOLUTIONARY! SIMPLE! STERILE!

JUST STRIP OPEN . . . SLIP OUT STERILE INNER ENVELOPE

- No jars or solutions
- No clumsy glass tubes to break
- No nicked sutures or adhering glass splinters
- Sterile needle suture ready for use in seconds

Order your D & G EMERGENCY SUTURE PACK from your Surgical Supply Dealer . . . or fill out and mail coupon direct to us.

*Trademark



Contains Six D & G Needle Sutures In Individual, Quick-Opening SURGILOPE SP Sterile Strip Packs.*

Compact, plastic snap-catch pak—3½" x 2½" x ¾". Contains six sterile D & G Atraumatic Needle Sutures: 3 Anacaps® Silk, 4-0, ½ circle regular cutting needle; 3 Dermalene® Monofilament Nylon, 4-0, ½ circle inverted cutting needle. Each suture individually protected in quick-opening Surgilope SP Sterile Strip Pack.

CYANAMID

AMERICAN CYANAMID COMPANY
SURGICAL PRODUCTS DIVISION
DANBURY, CONNECTICUT

Producers of Davis & Geck Brand Sutures and Vim Brand Hypodermic Syringes and Needles. In Canada: North American Cyanamid Ltd., Montreal 16, P.Q.

American Cyanamid Company, Surgical Products Division, Danbury, Connecticut. Please send me _____ (quantity) Emergency Suture Packs, at $4.00 each. Bill me through my nearest SPD Dealer, or the SPD Dealer I have listed below.

_____ M.D.
(name)

_____
MT 458 (address)

Surgical Supply Dealer _____
(name)

_____
(address)

—Continued from page 92a

maceuticals, Division of Foster-Milburn Co., Buffalo, New York. Contain Kerohydric (a dewaxed oil-soluble, keratin-moisturizing fraction of lanolin) in an acid buffered polyethylene glycol monostearate emulsion. Indicated for the treatment of excessively dry, scaly skin. *Use:* As directed by physician. *Sup:* Tubes of 62.5 gram.

Panalba KM, The Upjohn Company, Kalamazoo, Michigan. Granules to be mixed with water, each teaspoonful of which contains tetracycline equivalent to 125 mg. tetracycline hydrochloride, 62.5 mg. novobiocin calcium, and 100 mg. potassium metaphosphate. Particularly well suited to pediatric use. Indicated for moderately acute, severe or prolonged infections commonly encountered in childhood. *Dose:* As directed by physician. *Sup:* Bottles of 60 cc.

Paraflex, McNeil Laboratories, Inc., Philadelphia, Pennsylvania. To relieve painful muscle spasm in a wide variety of arthritic, rheumatic, traumatic, and orthopedic disorders. Each tablet contains 250 mg. Paraflex chlorzoxazone (5-chlorobenzoxazolinone). *Dose:* 1 or 2 tablets administered three or four times per day as needed. Pediatric dosage in proportion to weight. *Sup:* Bottles of 50.

Pen-Vee K, Wyeth Laboratories, Inc., Philadelphia, Pennsylvania. Tablets containing either 125 mg. or 250 mg. potassium penicillin V. Indicated for treatment of hemolytic streptococcal and susceptible staphylococcal infections, pneumococcal infections and gonococcal infections. *Dose:* As directed by physician. *Sup:* Vials of 36.

Peritrate with Nitroglycerin, Warner-Chilcott Laboratories, Morris Plains, New Jersey. Tablets, each containing 10 mg. pentaerythritol tetranitrate and 0.3 mg. nitroglycerin. Indicated for the angina pectoris patient who benefits from the coronary vasodilating action of Peritrate but who may need immediate relief under stress. *Dose:* As directed by physician. *Sup:* Bottles of 50.

Suvren, Ayerst Laboratories, New York, New York. Captodiamine hydrochloride. Indicated in stress-induced gastrointestinal disorders, as reflected by irritable or spastic colon, mucous colitis, constipation, nervous diarrhea and vomiting. It is also valuable in mild anxiety, tension, depression, psychogenic asthma and dermatoses of emotional origin. It has been used with success in hyperactive children with brain damage and as an adjunct to tranquilizers in the treatment of psychoses; in predictable and anxiety states; e.g., before elective surgery and pregnancy. *Dose:* Adults; 100 mg. three times daily with meals, a fourth dose of 100 mg. may be taken at bedtime. Children; 50 mg. three times daily with meals, and 100 mg. at bedtime. Maintenance dose as directed by physician. *Sup:* 50 and 100 mg. tablets in bottles of 100.

—Concluded on page 102a



Perhaps the most effective sulfonamide available today for urinary infections

Continuing studies show that Elkosin is one of the safest and most useful antibacterial agents known today. For example: ". . . recently the results of sulfisomidine [Elkosin] therapy were evaluated in 55 additional patients with urinary tract infections. . . . 31 were cured; 4 showed a good response . . . With no attempt made to maintain an adequate daily fluid intake or alkalinization of the urine, no renal or hematopoietic toxicity occurred."*

For systemic infections, too, Elkosin therapy is sound therapy.

*Rutenburg, A. M.: Ann. New York Acad. Sc. 69:389 (Oct. 12) 1957.

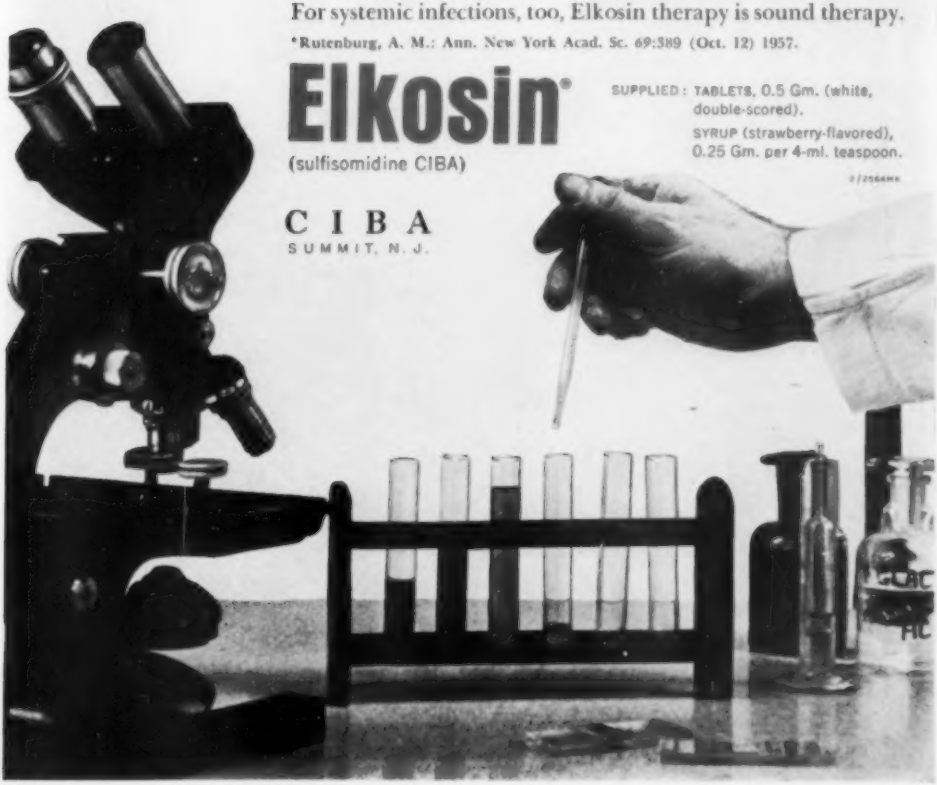
Elkosin®

(sulfisomidine CIBA)

SUPPLIED: TABLETS, 0.5 Gm. (white, double-scored).
SYRUP (strawberry-flavored), 0.25 Gm. per 4-ml. teaspoon.

2/2564MR

CIBA
SUMMIT, N. J.





when there's trouble, trouble everywhere... along her G.I. tract

trouble trouble trouble trouble trouble trouble trouble trouble trouble trouble trouble trouble trouble trouble trouble trouble trouble trouble trouble trouble

TABLET

Tridal

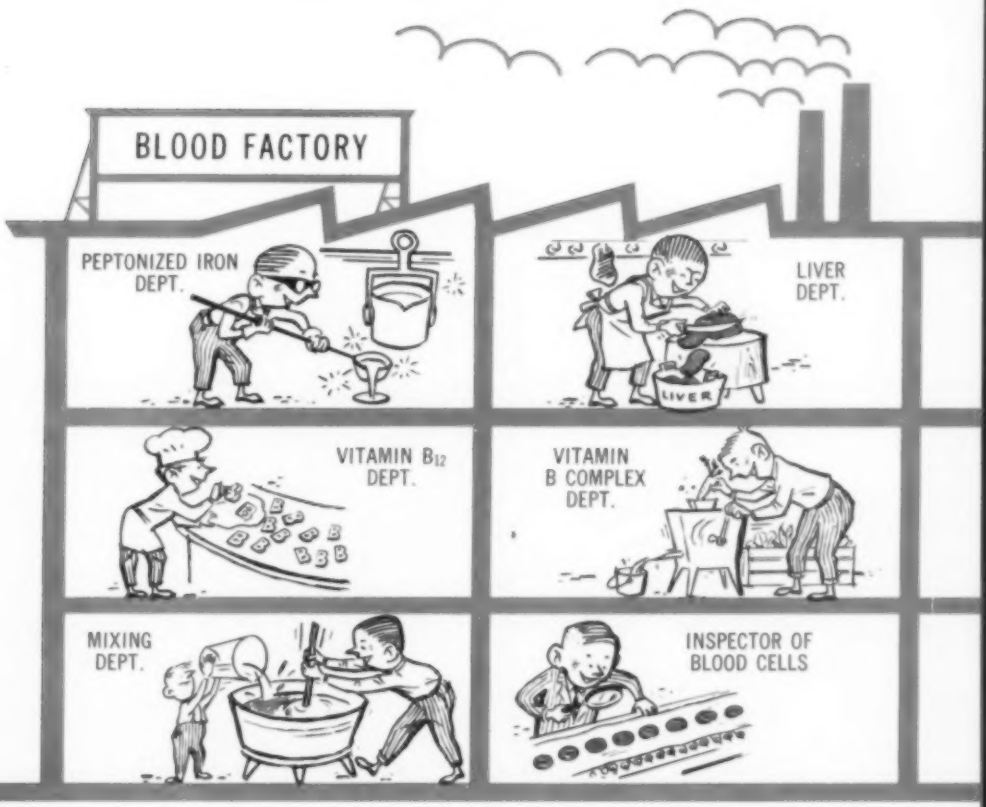
(DACTIL + PIPTAL in one tablet)

rapidly and dramatically effective[1] cholinolytic of choice in a variety of gastrointestinal conditions[1]...relieves pain and spasm, normalizes motility *and* secretion[1]..."remarkably free of undesirable effects...."[2]

(1) Settel, E.: J. Am. Geriatrics Soc., January 1958. (2) Necheles, H., and Kirshen, M. M.: The Physiologic Bases of Gastrointestinal Therapy. New York, Grune & Stratton, Inc., 1957, p. 87.

Each TRIDAL tablet contains 50 mg. of the visceral eutonic DACTIL® (the *only* brand of piperidolate hydrochloride) and 5 mg. of the anticholinergic PIPTAL® (the *only* brand of pipenzolate methylbromide). Bottles of 50 compressed white tablets.

LAKESIDE



The preferred hematinic with **PEPTONIZED** *iron*

LIVITAMIN®

Peptonized iron is virtually predigested. It is absorbed as well as ferrous sulfate, and is one-tenth as irritating to the gastric mucosa. Anemias refractory to other forms of iron will often respond promptly to Livitamin therapy.

The Livitamin formula, containing the B complex, provides integrated therapy to correct the blood picture, and to improve appetite and digestion.

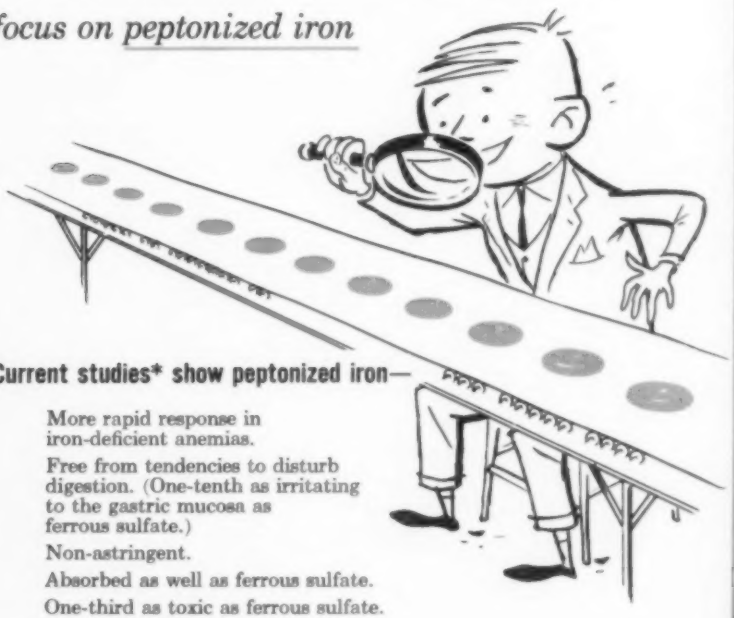
Each fluidounce contains:

Iron peptonized (Equiv. in elemental iron to 71 mg.)	420 mg.
Manganese citrate, soluble	158 mg.
Thiamine hydrochloride	10 mg.
Riboflavin	10 mg.
Vitamin B_{12} Activity (derived from Cobalamin conc.)	20 mcg.
Nicotinamide	50 mg.
Pyridoxine hydrochloride	1 mg.
Pantothenic acid	5 mg.
Liver fraction 1	2 Gm.
Rice bran extract	1 Gm.
Inositol	30 mg.
Choline	60 mg.

The S. E. MASSENGILL Company BRISTOL, TENNESSEE
NEW YORK • KANSAS CITY • SAN FRANCISCO

For predictable therapeutic advantages . . .

focus on peptonized iron



Current studies* show peptonized iron—

More rapid response in iron-deficient anemias.

Free from tendencies to disturb digestion. (One-tenth as irritating to the gastric mucosa as ferrous sulfate.)

Non-astringent.

Absorbed as well as ferrous sulfate.

One-third as toxic as ferrous sulfate.

LIVITAMIN® with Peptonized Iron

*Keith, J.H.: Utilization and Toxicity of Peptonized Iron and Ferrous Sulfate, Am. J. Clin. Nutrition *1*:35 (Jan.-Feb., 1957).

Currently, mailings will be forwarded only at your request. Write for samples and literature.

The S. E. MASSENGILL Company

BRISTOL, TENNESSEE

NEW YORK • KANSAS CITY • SAN FRANCISCO

"A COAT FOR MEPROBAMATE"

"Meprotabs" are new, *coated*, white, unmarked 400 mg. tablets of meprobamate. ■ "Meprotabs" are pleasant tasting, and easy to swallow. ■ In this new form, the nature of medication is not identifiable by the patient. ■ "Meprotabs" are indicated for the relief of anxiety, tension and muscle spasm in everyday practice. ■ *Usual dosage:* One or two tablets t.i.d.

"Meprotabs"

(2-methyl-2-n-propyl-1,3-propanediol dicarbamate)

WALLACE LABORATORIES, *New Brunswick, N. J.*

Trīva relieves vaginitis symptoms... in a matter of minutes!

Over 358,997 cases of vaginitis in the past 5 years have been treated with Triva. Reports and increasing use of Triva point to this important fact: almost immediate relief from vaginitis symptoms proves Triva is a most dependable and effective treatment...

Most cases of trichomonal and non-specific vaginitis are rendered organism-free within 12 days. (Monilia genus may require longer.) Simple to prescribe: "Triva (Boyle) sig: douche, b.i.d. for 12 days."

Available at all pharmacies in convenient packages of 24 individual 3 Gm. packets, each containing 35% Alkyl Aryl sulfonate (wetting agent and detergent), .5% Disodium ethylene bis-iminodiacetate (chelating agent), 53% Sodium sulphate, 2% Oxyquinoline sulfate and 9.5% dispersant.

BOYLE & COMPANY

LOS ANGELES 54, CALIFORNIA



seated female Nayarit civilization/ Guerrero Province, Mexico approx. 900 AD courtesy of Meyer & Franklin Gallery

—Concluded from page 96a

Sudafed, Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, New York. New dosage form. Now available in sugar-coated tablets of 30 mg. and uncoated tablets of 60 mg. psuedoephedrine hydrochloride. Indicated for use as a nasal decongestant. *Dose:* Adults and older children, 60 mg. three or four times daily. Infants and younger children, as directed by physician. This product was incorrectly listed as Sunafed in our February issue.

Trilafon Injection, Schering Corporation, Bloomfield, New Jersey. Each cc. contains 5 mg. perphenazine in an aqueous vehicle for intramuscular or intravenous injection. Indicated when a more rapid tranquilizing effect is required than is obtainable with oral medication or when oral medication is not feasible. *Dose:* As directed by physician. *Sup:* 1 cc. ampuls in boxes of 6 and 100.

Uristix, Ames Company, Inc., Elkhart, Indiana. "Dip and read" combination test for proteinuria and glycosuria. Paper strips impregnated with reagents change color with positive tests —operator dips the strip in the specimen and compares the result to the color guide. *Sup:* Bottles of 125 strips.

Varidase Buccal, Lederle Laboratories Division, American Cyanamid Co., Pearl River, New York. Mint-flavored tablets, each containing 10,000 units of streptokinase and 2500 units of streptodornase. Indicated for abscesses, burns, cellulitis, hematoma, edema, uveitis, sinusitis, chronic bronchitis, chronic bronchiectasis, thrombophlebitis and leg ulcers with or without superimposed infection. *Dose:* One tablet, allowed to dissolve in the mouth for 5 minutes, permitting absorption into the body through the mucous membrane. *Sup:* Bottles of 24.

Vi-Sol Tablets, Mead Johnson & Company, Evansville, Indiana. New soluble tablet form of Poly-Vi-Sol, Tri-Vi-Sol, and Deca-Vi-Sol having the same formulations as the drop dosage preparations for infants. Synthetic vitamin formulations for children beyond the drop dosage age, as well as adults. *Dose:* One tablet per day. *Sup:* Each tablet in bottles of 24 and 100.

Corrigendum— Butazolidin Alka Capsules, Geigy Pharmaceuticals, Ardsley, N. Y. In the Modern Medicinal listing of this product in our February issue the indications should have read as follows: To provide prompt and prolonged relief of pain coupled in many instances with increased mobility, relief of spasm, and reduction of pain and swelling and tenderness in such conditions as gout, rheumatoid arthritis, osteoarthritis, psoriatic arthritis, rheumatoid spondylitis, painful shoulder syndromes and acute superficial thrombophlebitis. *This product is not an anti-spasmolytic.*

to pull your diarrhea patients back in shape rapidly

INTROMYCIN
AROBON

two palatable antidiarrheals

FOR IMMEDIATE RELIEF OF SYMPTOMS AND A QUICKER RETURN TO NORMAL

formed stools are produced 5 times faster[1]
lost electrolytes are replenished
water loss is better controlled

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1. Abella, P. U.: J. Pediat. *41*:182, 1952.



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A. BURGESS VIAL, M.D.
FREDERICK A. COLLER, M.D.
Ann Arbor, Michigan

A Few Aids for the Patient with Advanced Cancer

The progress of the fight against cancer has led to the cure of many people, but it has also led to greater longevity, comfort, and well-being among people with recurrent or advanced cancer. Some of the agents or procedures which have proved useful in our hands in common malignancies are pointed out here.

Advanced Carcinoma of the Breast Since carcinoma of the breast is the most common cancer in women, and since in about sixty percent of these patients, the disease ultimately goes beyond the area encompassed by radical mastectomy, the problem of care of this unfortunate group is a great one.

It was reported as early as 1896, by Beatson,[1] that one could influence the course of advanced carcinoma of the breast in some patients by oophorectomy. Among patients in their active menstrual years, and for varying periods even up to ten years after menopause, oophorectomy may cause regression of the tumors; in the premenopausal group about forty percent will respond, while in the post-menopausal group only about ten percent may respond to removal of the ovaries. Radiation ablation of the ovaries has proved worthwhile in the hands of many roentgenologists, particularly when the dosage to the ovaries has been high; in a few patients the fall in estrogen excretion did not occur for three to four months after radiation ablation of the ovaries. The average length of regres-

sion among those patients who do have a response to oophorectomy or radiation ablation is about nine months. No patient has had a remission longer than five years.

Adrenalectomy has produced some regressions in patients with advanced mammary cancer, and this effect also is thought to be based on withdrawal of estrogen, but of course adrenalectomy is not effective if active ovaries are still in place. Since Huggins[2] first demonstrated this effect of adrenalectomy, in 1951, it has been found in most series that about forty-five percent of such patients have remissions. If a patient has had regression of her lesions following oophorectomy, and if the lesions then recur, and the patient is excreting estrogen again, one has the most likely set of indications that the patient will be benefited by adrenalectomy. If a patient has experienced regression of her lesions after the administration of androgens, the lesions will quite likely respond to withdrawal of estrogens. Response to adrenalectomy lasts on the average about nine months.

Hypophysectomy has been found worthwhile by certain investigators.[2, 4] Responses have been variously reported but range about fifty-five to sixty percent. The length of remission in one series averaged about 14 months.

Androgens such as testosterone propionate, 100 mg. in oil I.M. three times weekly, or Halotestin, 5 mg. q.i.d., have proved helpful in about 20% of patients. It is suggested by most workers that oophorectomy be tried before androgens in the premenopausal patient, as the percentage helped is greater, and the patients do not become masculinized.

Stilbesterol, 5 mg. t.i.d., has caused regressions in some elderly patients with advanced carcinoma of the breast. It seems wiser not to employ this agent in youthful patients who already have large amounts of estrogen; even in a few elderly patients, it will cause a flare of the tumor. It is thought that the estrogen may exert its beneficial influence through the pituitary, by depressing certain hormones such as growth hormone.

Radiation therapy to areas of advanced carcinoma of the breast has been worthwhile. In a patient who has metastatic disease in the spine or other weight-bearing areas, radiation to the area almost always cuts down the pain and sometimes forestalls compression fracture. Local soft tissue recurrences and inflammatory carcinoma of the breast also are often controlled by X-ray.

Success had been reported in the use of nitrogen mustard therapy, and drugs related to nitrogen mustard.[5] Frequently such responses are short, about two to three months, when the tumor again advances.

Response to cortisone therapy is similarly short-lived[6]

Carcinoma of the Cervix of the Uterus Among the complications of advanced carcinoma of the cervix of the uterus is involvement of the bladder and ureters, and invasion of the rectum or bowel lying in the pelvis. If the disease is not too far advanced, diversion of the urinary stream, as by nephrostomy, can be considered. If there is involvement of the rectum, pelvic colon, or small bowel with obstruction, a colostomy or a side-tracking

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From the Department of Surgery and The University Hospital, University of Michigan Medical School.

bowel operation may add comfort and perhaps time to the patient's life.

It is unfortunate that none of the present chemotherapeutic drugs have any real influence on carcinoma of the cervix, and most of these patients will have had radiation therapy to the point of tolerance as their primary treatment. If they have not, radiation therapy might be indicated for palliation. Radical pelvic exenteration has been life-saving in some cases.

Carcinoma of the Lung Some patients with advanced carcinoma of the lung have enjoyed a degree of palliation from radiation of the lesion, and others have had some regression of this type of lesion following the use of nitrogen mustard or other alkylating agents.

Carcinoma of the Stomach None of the hormonal or chemotherapeutic agents in use today have any real effect on the advanced carcinoma of the stomach. If there is obstruction, or bleeding into the gastrointestinal tract, operative treatment may improve the patient's condition for a while, even though known residual neoplasm makes "cure" an impossibility. Radiation therapy has nothing to offer these patients.

Carcinoma of the Colon and Rectum As in gastric carcinoma, neither chemotherapeutic agents nor X-ray can offer much help to patients with carcinoma of the colon and rectum. One must often fall back on old surgical procedures such as palliative resections or sidetracking of the bowel. It is best to remove a rectum that is the source of metastatic carcinoma if this can be done with safety, for the tenesmus many of these patients suffer, is very severe when the tumor is left in place.

Carcinoma of the Prostate This hormone-dependent tumor was demonstrated to respond to orchidectomy or to estrogen administration by Huggins[7] in 1941. Dr. Huggins removed the adrenals of some patients with carcinoma of the prostate after recurrence of the disease, and found that while some of them responded, the remissions were too short to warrant the procedure. Response to stilbesterol is well known.

Carcinoma of the Ovary This tumor is probably the most sensitive carcinoma to nitrogen mustard and related alkylating agents.[8] These lesions are often affected by radiation therapy too, but are commonly widespread enough in the advanced stages to preclude use of radiation therapy. Ascites has been controlled, masses shrunk, and even intestinal obstruction occasionally helped by these drugs.

Lymphoblastoma Group This group of tumors is most sensitive of all to the action of radiation therapy, and similarly to the radiomimetic alkylating agents like nitrogen mustard. If a tumor is localized, radiation therapy is often chosen, whereas if the process is generalized the alkylating agents are useful. Certain other compounds, such as 6-mercapto-purine or some of the folic acid antagonists, have certain indications in this broad general group.

Relief of Certain Specific Symptoms or Problems

Ascites When this condition is due to neoplastic involvement of the peritoneal cavity, and even when the source is a carcinoma of the gastrointestinal tract in which the gross tumor mass is unresponsive to nitrogen mustard type therapy, one may well diminish or abolish the ascites by injection of triethylene thiophosphoramide or other alkylating

agents into the cavity. Triethylene thiophosphoramide, 40 mg., administered in this way has helped a number of people with carcinomatosis of ovarian origin, a few with carcinoma of the breast, and even some with colon neoplasms; this treatment can be repeated as often as every three weeks if the hemoglobin level, white cell count, and platelet count are within normal limits, and the ascites reaccumulates.

Pleural fluid The aspiration of pleural fluid which is the result of carcinoma of the lung, or of carcinoma of the breast, or a number of other neoplasms, results almost uniformly in greater ease of respiration; the instillation of triethylene thiophosphoramide as suggested in controlling ascitic fluid has usually resulted in a slower reaccumulation of the fluid, and sometimes cessation of it. Occasionally stripping of the pleura has been performed, thus preventing the return of fluid.

Pain This problem, often a difficult one, is well discussed in a book edited by M. J. Schiffrin.[9] In addition to the number of narcotics and analgesics, one should think of promazine and related drugs, since they reinforce the action of the analgesics and allay some of the apprehension which goes with the patient's status. Nerve blocks, intrathecal alcohol injection (in the hands of experienced anesthesiologists), or cordotomy and tractotomy have been helpful. Prefrontal lobotomy and related frontal lobe operations have not proved rewarding in our experience, primarily because unilateral operations have almost never controlled the pain, and bilateral operations usually result in loss of social responsibility to the extent that the patients are a great deal of care to their families, particularly with reference to bowel control.

Vomiting If the cause of the vomiting is obstruction of the gastrointestinal tract, a direct attack on the obstruction may be indicated. Relief of ascites may sometimes alleviate this symptom.

When the vomiting is due to hepatic or retroperitoneal involvement, promizine and related drugs have been helpful, as have Dramamine® and Bonamine® on occasion.

Summary

For certain specific malignant lesions the new chemotherapeutic agents have added to the radiation and surgical approaches to palliation. Treatment of pain is more adequate since the anesthesiologists and pharmacologists have added new blocks and drugs that reinforce other treatments and tranquilize the patient. Other symptoms have responded to the newer agents for palliation.

It is noted that in these patients who need friendly, sympathetic help, the interest on the part of the physician increases the morale of both the patient and his family, and the patient's remaining days are more productive and enjoyable.

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Abdominal Enlargements of Infancy and Childhood

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Abdominal enlargements are seen in infancy and childhood. However, the underlying cause of these enlargements may be obscure. Although, abnormalities of the kidney, sympathetic nervous system, gastrointestinal tract, adrenal gland and ovary more frequently produce abdominal enlargements, other organs and tissues may also be involved, with resulting abdominal enlargement.

Alteration of physiological functions of these organs and/or tissues by trauma, infection, congenital anomalies, metabolic disorders, endocrine disorders or neoplastic growth, results in a wide range of signs and symptoms in the infant or child. However, abdominal enlargement is a relatively common sign which may or may not carry a poor prognosis.

In view of the possibility of unusual and severe diseases presenting themselves in this manner, stress should be placed on the great need and value of early diagnosis and adequate treatment of any child with enlargement of the abdomen. The fears and anxieties of parents and physicians alike can be abated through this means.

Abdominal enlargements in infancy and childhood are rather infrequently encountered in the practice of medicine, and many of us become reluctant to incorporate the simple but useful diagnostic tools so readily available. Through

the use of abdominal and rectal palpation, close scrutiny of the clinical picture, auscultation, and the simple laboratory aids of blood count, urinalysis and a flat plate of the abdomen, one can readily diagnose the majority of these abdominal enlargements.

Fecal Impaction is by far the most common cause of a palpable abdominal mass in infancy or childhood. The mother will consistently give a history of constipation in the child, that has been recent or chronic in nature. However, impactions of relatively long duration may cause a partial obstruction and liquid fecal material may pass around the mass or burrow through with a resulting diarrhea. The mass which is large enough to fill the lumen of the bowel can obstruct completely.

On rectal examination the impaction can usually be palpated in the rectum or lower sigmoid. A gentle examination using an anesthetic ointment gives more information than any other method. Abdominal examination usually reveals nothing unless the impaction is at the sigmoid level or above. Occasionally, multiple discreet masses can be palpated along the transverse and descending colon. These masses are very characteristic in that they are freely movable and only slightly painful on palpation. The patient does not appear to be acutely ill nor chronically ill but only uncomfortable. X-ray examination with or without barium is of little diagnostic value and may be more confusing than helpful.

The treatment of constipation and fecal impactions with enemas and diet has been relatively unchanged until the recent introduction of dioctyl sodium sulfosuccinate, which is non-toxic and acts by normalizing stool consistency. It is equally effective in infants and children as well as in adults.

Hirschsprung's Disease, although far less common, produces a more generalized enlargement of the abdomen with, or without, fecal impactions. In the early neonatal period, obstipation and constipation are prominent, with marked distention of the large bowel. The colonic distention is secondary to tremendous accumulations of gas and inspissated fecal material. This clinical picture, plus roentgenographic evidence, with or without barium, of a markedly distended colon without mechanical obstruction is pathognomonic. With the clarification of the etiologic factor, surgical intervention has offered a hopeful future to these patients. Instead of removing the dilated and enlarged colon, the area of bowel showing neuromuscular deficiencies in the rectosigmoid is excised, with excellent results. Due to a relative hypotonicity of the colon, a trial of the sulfosuccinate preparations, in addition to a low residue diet, is usually extremely palliative postoperatively.

In the neonatal period some of the more extreme etiologic factors related to abdominal enlargements are evident. *Meconium Ileus, Atresia of the small bowel,* and *Hypertrophic Pyloric Stenosis* fall in this category.

All three of these conditions are seen in the neonatal period, however, time and physical findings are responsible for differentially diagnosing each. All present the clinical picture of vomiting and abdominal distention. In *Meconium Ileus* the infant begins to vomit during the first two to three days of life, at first small amounts of clear fluid, but later much larger amounts are produced and the color darkens. The parallel trans-

verse ridges of intestinal obstruction are readily discernible through the thin abdominal wall. Stools may be absent or scanty but, in spite of milk feedings, never become light or yellow in color. Fecal concretions of putty-like consistency are palpated, usually in the lower abdomen. The meconium is tenacious dark and sticky and adheres to anything with which it comes in contact. Roentgenologic examination reveals a characteristic mottled or granular appearance of the inspissated and obstructing meconium.

Administration of pancreatic enzymes by gastric gavage or rectal retention enema may be beneficial. However, the extent and severity of involvement determine the need for surgical

Unlike Meconium Ileus, *Atresia of the small bowel* produces abdominal distention at the end of two to three days rather than at birth. This depends upon the position of the atresia. Vomiting, however, begins the first day of life and becomes progressively severe as feedings are offered. High obstructions produce sour curd vomitus, whereas lower obstruction produces vomitus with a fecal odor and appearance. The stools are small and the meconium normal in appearance. Their presence should not lull one into a false sense of security. Curds and cornified epithelial cells are never found in the stools. This is diagnostic of atresia. A simple flat plate of the abdomen disclosing gaseous distention of the upper bowel, in an infant who is vomiting, and who has had stools without curds or epithelial cells, must immediately be treated surgically in order to save the infant's life. Delay in order to determine the site of obstruction results in fluid and electrolyte imbalance, shock and death.

Pyloric Stenosis, unlike the Atresia and Meconium Ileus, does not produce vomiting until the third week of life. The vomiting is progressively severe, and by six weeks is always projectile. Reverse peristaltic waves are seen over the upper abdomen which is usually markedly distended. The vomitus, unlike atresia and meconium ileus, does not contain bile. The confirmatory diagnostic finding in this patient is the palpation of a tumor mass in the mid right upper quadrant. The effects of palliative medical management with antispasmodics, thickened feedings, sedatives, procaine, etc., are equivocal. Critical evaluation preoperatively, and energetic supportive measures for correcting the imbalances which exist, are probably far more effective in the end result, than the surgical procedure.

Peptic Ulcer, although a relatively common disorder in our adult population, until recently has been a pathologic entity of rare occurrence in infants and children. Of roughly 400 cases reported in the literature, the majority have been diagnosed at the autopsy table rather than during life. The terminal solitary, or multiple ulceration of the gastric or duodenal mucosa found in infants and children, has generally been considered to be secondary to more severe infectious processes, pathological changes in the central nervous system, or burns. These are infrequently diagnosed premortem, and are rarely considered as a part of the clinical picture. However, the symptom complex of perforation i.e. abdominal pain, abdominal distention, vomiting, diarrhea, and/or constipation must be considered as seriously in children as it is in adult life.

My first introduction to peptic ulcer

in childhood was six years ago, when a nine year old colored male came to me with complaints from his mother of being a behavior problem. She had tried everything she knew in the way of bribes, punishment, lectures, removal of privileges, etc., to stop his complaints, with no apparent success. She informed me that his father had an ulcer and always complained of epigastric distress, nocturnal pain and epigastric pain two hours after meals, which was relieved by the ingestion of milk, etc., and now the boy was doing the same thing. All of her efforts had been unsuccessful.

Physical examination of the boy was entirely negative. There was no blood in his stoll. He was a very alert, hypertonic type of child, who was taking singing, dancing, and piano lessons. He was quite aware of and concerned about his father's illness, as well as the poor financial situation of the family. He wanted to quit school and to get a job to aid the family's finances. He had a steady girl and was already quite concerned about their future. He had been on an amateur program, and won second place as a contestant, but was extremely disappointed because he had not been picked first.

With the above history and negative physical findings he was considered to be an excellent candidate for our Child Guidance Service. After two months of psychotherapy there was no relief of symptoms and the patient was referred back to the Department of Pediatrics for further diagnostic workup. Needless to say, the barium studies revealed a large duodenal ulcer, which responded well to proper therapy.

Since that time, every child with vague abdominal complaints of undetermined etiology has had barium studies, and the incidence of peptic ulcer in our clinic has been approximately one in three hundred admissions.

Nutritional disturbances, repeated bouts of constipation, diarrhea, abdominal tenderness and pain, and distention, gastrointestinal bleeding and other unexplainable gastrointestinal upsets can be, and commonly are, caused by peptic ulcers. In the very young infant exsanguination from a perforated ulcer can occur. On four occasions during the past two years I have personally treated such patients. Their ages ranged from 2 weeks to 6 months of age. One had a severe laryngo-tracheo bronchitis, two had severe diarrhea with dehydration and acidosis, and one, a severe bronchopneumonia. All were critically ill and showed a poor response to the usual therapy for their primary diseases.

All of these patients presented an identical clinical picture, i.e., sudden onset of severe abdominal tenderness, marked abdominal distention, extreme hunger, pallor and a shock-like picture. This was followed within an hour by the projectile vomiting of bright red and dark clots, extreme hyperperistalsis, and finally, in about two to three hours, diarrhea with tarry and bright red stools. The red blood count dropped 2-3 million in the two-hour period, and in spite of vigorous therapy, all four infants died.

A fifth infant was seen with a similar clinical picture. However, at the onset, blood, calcium, vitamin C, morphine, and a continuous gastric gavage of skimmed milk and Amphojel were given. There was an excellent response within 24 hours and the infant recovered. A barium meal, two days after the episode, failed to disclose an ulcer, but a hypertrophied rugal pattern and extreme gas-

tric hyperactivity were found.

It is imperative that, irrespective of age, all patients presenting gastrointestinal signs or symptoms of undetermined, or equivocal origin, be given the benefit of adequate diagnostic procedures to rule out peptic ulcer.

Neuroblastoma is a common neoplastic disorder of infancy and childhood. However, when occurring within the abdomen it is about half as common as the *Embryoma* or *Wilm's Tumor of the Kidney*. *Neuroblastoma* ranks second only to leukemia as far as frequency of occurrence of neoplastic growths in this age group, and 55-60% are abdominal in origin. The tumor mass can arise from any area of the sympathetic chain, or from the periadrenal tissue, but most commonly the site of origin is the adrenal medulla. The abdominal mass is usually a very hard, nodular type of lesion, with poorly defined borders, that tends to cross the midline. In about 80% of the patients, it occurs during the first five years of life. The path of metastases is usually via vascular channels to the liver, kidney, central nervous system and especially the skeletal system. However, there is a late spread to the lung and regional lymph nodes.

There are no specific symptoms that are noted clinically. The only consistent physical finding is a palpable irregular non-tender abdominal mass. Frequently, however, a child will be taken to the physician because of fever, anorexia and fatigue rather than for any specific physical finding, and only with a careful, but gentle, abdominal examination will the mass be noted early.

Wilm's Tumor arises only from within the kidney itself. Unlike the neuroblastoma it is smooth and somewhat lobulated, more sharply demarcated and rarely crosses the midline. It occurs most commonly during the second and third year of life. The path of metastases of the Wilm's tumor is to the lung and regional lymph nodes, but metastases do not occur until the lesion reaches a very large size. Symptoms and signs are almost non-existent until metastases have occurred. The only positive finding is a palpable, well-demarcated, lobular abdominal mass, which is non-tender and fails to cross the midline.

Diagnosis of the Neuroblastoma or Wilm's Tumor cannot be made on the basis of symptoms or physical findings but is made by the surgeon and/or pathologist after surgical removal. Therefore, when a child with enlargement of the abdomen and a palpable abdominal mass is seen, the following plan of management should be mandatory:

1. Take a careful history from the family concerning fever, pain, hematuria, anorexia or weight loss. These are all suggestive of metastases and alter the ultimate prognosis.

2. Gently and carefully, examine the abdomen in order to determine the size, location and consistency of the abdominal mass. Do not be overzealous in your palpation, and do not allow anyone other than the individuals actually involved in the treatment of the patient to palpate the abdomen. In a University Center, where student, intern, resident and staff members are eager for experience and knowledge, much harm may be done in promoting the spread of metastases if everyone repeatedly examines the patient's abdomen.

3. Use emergency laboratory procedures only to supplement the clinical diagnosis and to aid in planning therapy.

a) The blood count and hematocrit

will be helpful in determining the extent of anemia and dehydration.

b) Roentgenographic skeletal survey and a chest film will determine the extent of metastases.

c) Intravenous pyelography will be helpful in visualizing unilateral or bilateral renal involvement.

4. Fluids, blood, antibiotics, etc., should be used with discretion preoperatively and during surgery.

5. Immediate excision and removal of the tumor should be accomplished irrespective of the size of the tumor.

6. Postoperative irradiation of the operative site should be initiated on the day of operation. *Preoperative irradiation has been conclusively shown to be detrimental and is contraindicated.*

Summary and Conclusions

1. A number of clinical entities producing abdominal enlargement in infancy and childhood have been presented.

2. The age and clinical picture at the time of examination are most informative in differentiating the etiology of abdominal enlargements.

3. The use of abdominal and rectal palpation, auscultation and simple laboratory aids yield sufficient information to the clinician to diagnose accurately and treat the majority of the conditions producing abdominal enlargements.

4. A simple flat plate of the abdomen can give as much or more information than barium studies, without the dangers of aspiration or inspissation of barium, or perforation of an obstructed bowel.

5. It is imperative that, irrespective of age, all patients presenting gastrointestinal signs or symptoms of undetermined or equivocal origin, be given the benefit of adequate diagnostic procedures to rule out peptic ulcer.

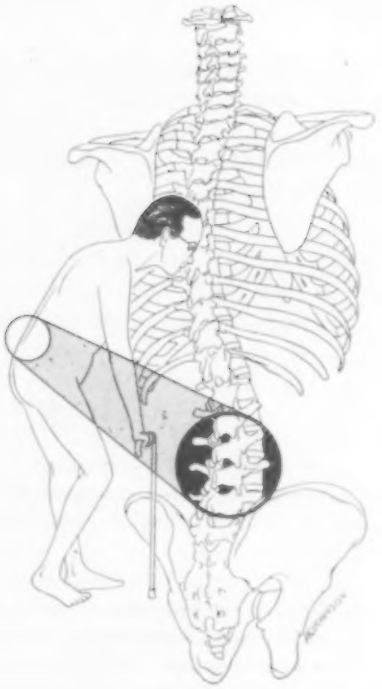
6. Neuroblastoma and Wilm's Tumor are surgical emergencies which cannot be readily differentiated preoperatively. Their prognosis depends upon early diagnosis and adequate therapy.

Mercy Hospital, 2537 Prairie Avenue

SPONDYLOSIS

The value of paravertebral and facet infiltrations of the spine as therapeutic measures.

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Newport, R. I.



Because of the intractable and nerve wracking pain which is usually associated with clinically active osteoarthritis of the spine, and also because of the previously accepted dictum that nothing much can be done to alleviate this situation, we undertook, two years ago, to find a method of therapy which would relieve the patient suffering from this form of martyrdom. Our idea resulted from a consideration of the usual methods of intra-articular infiltrations with an anesthetic agent combined with either hydrocortisone, or a prednisolone suspension.

Osteoarthritis process elsewhere represents a degenerative change in the joints, rather than an inflammatory one, hence many authors both in the United States and abroad prefer the nomenclature of "spondylosis" to that of "spondylitis". As a general rule, this process does not cause symptoms since it is the result of the physiological ageing process which is present in most persons past the age of fifty years. Roentgenograms of subjects of an older age group will show these alterations of marginal overgrowth of bone without a history of the individuals having suffered any appreciable symptoms. Degenerative spondylitis or spondylosis, with out symptoms, should arouse no concern when found on routine examination.[1-6]

However, when these processes are activated by either gross or microtrauma, and accompanied by nerve root irritation, it may become a serious concern of the physician from a diagnostic point of view. Degeneration of discs with narrowing of the intervertebral foramina and overriding of the apophys-

eal joints can lead to painful symptoms in spondylosis. The abnormal pressure which causes osteophytes to form on the margin of the vertebral bodies with resulting nerve root compression within the intervertebral foramina can produce a great deal of pain, which may have thoracic and abdominal irradiations to the extent that it may completely fool the physician, and make him think of either acute thoracic, or abdominal disease.

Pain, localized to the distribution of the 3rd cervical segment, over the scalp, post-auricular, occipital and posterior parietal regions, is experienced by the majority of patients having cervical radicular pain due to cervical spondylosis. This pain may easily simulate an attack of migraine headache, hypertensive encephalopathy, acute sphenoiditis, tension headache due to spasms of the splenius muscles, medial protrusion of a cervical disc, etc.

One frequently encounters patients with severe precordial, or epigastric pains and distress due to nerve root irritation at either T3, T4 or at T5 in spondylosis. Once cardiac, mediastinal, or upper abdominal disease has been ruled out, and the spinal cord found normal, one should think of possible spondylosis as the etiological agent, and investigate the dorsal spinal segments for nerve root irritation and distribution of pain. Insofar as the distribution of pain is concerned into the lower abdomen from nerve-root irritation eminating from the lumbar spine, a knowledge of the dermatomes in this area will afford the physician a clue.

Parenthetically, it may be mentioned that osteoarthritis of the sacroiliac joints is fairly easily ruled out by intra-articular infiltrations of a combination of an injectable anesthetic agent by hydrocortisone or prednisolone in suspension. When the question is that of a differential diagnosis between a sacroiliac spondylosis and a ruptured intervertebral disc, this test becomes most helpful. In sacroiliac spondylosis the pain, which resembles a ruptured intervertebral disc, disappears after the first or second infiltration, whereas, in cases of herniation of a disc the pain will persist unchanged. This procedure has been found to be a reliable diagnostic test.

Mode of Treatment Hydeltra, T.B.A.*® or prednisolone suspension was used exclusively throughout these series of instances of cervical, dorsal, lumbar or sacroiliac spondylosis. The dosage used in all cases was 20 mgm. of prednisolone aqueous suspension in 1 cc. The infiltrations were made at 7 day intervals. Each patient was followed up and evaluated by the same physician for subjective relief, which consisted of a diminution of sensitivity and tenderness on palpation over the spinous processes and paravertebrally, together with absence of radiation of pain due to nerve root irritation. There were no untoward side reactions observed at any time. We were able to observe that the use of Cyclaine Hydrochloride 1% (Hexylcaine hydrochloride) as an anesthetic agent prior to the infiltration of prednisolone suspension, produced a better anesthesia than had been observed before with other local anesthetic agents which we had used.

A few months after this work was begun, some two years ago, a similar study was published by Cohen, Scott

* Merck, Sharp & Dohme Co., Philadelphia, Pennsylvania.

and Turner at the Arthritis Clinic of the Philadelphia General Hospital.[7] However, cortisone and hydrocortisone suspensions were used exclusively throughout their series of patients. After extensive use of hydrocortisone suspension we found Hydeltra T.B.A., or prednisolone (Merck), to be superior in its action. Also no attempt was made by Cohen et al. to infiltrate the articular facets, a method which we found to be effective.

Technique of Infiltration X-rays of the spine in their various segments were done in each patient. To elicit pain, at the various segments, either a reflex hammer was used for tapping the spinous process gently, or else normal pressure of the thumb was employed. It would be obvious that undue pressure can always elicit sensitivity in patients having a low threshhold to pressure effects.

After the use of nycitim was determined, the skin, at the site, was treated with Metaphen Tincture. Then a skin wheal was made at the site for the injection with Cyclaine Hydrochloride, 1%. The site of injection was 1 inch or about 3 cm. lateral to the spinous process. A 2 inch, 22 gauge needle was introduced entering at an angle of 45° to the spinous and the transverse processes, and thrust inward until bone was struck. To render the introduction of the needle less painful Cyclaine 1% was infiltrated throughout the entire needle tract as the needle entered. At this point, the needle was withdrawn slightly and the point directed medially and caudad, and then the suspension of prednisolone contained in another syringe was injected at the site. This has been considered to be a paravertebral injection. A true intra-articular injection is impossible because of the anatomical type of spinal articulation. However, one can come very close to the inferior articular process or facet if, when striking the bone of the vertebral body, one withdraws the needle and swings the hub medially about 5°, and then thrusts downward again until bone is struck. X-ray controls of this procedure were done, as is shown in Fig. 1. (X-ray).

Response As has been noted, Table 1, the value of paravertebral and facet injections of prednisolone has been computed on a basis of 25 patients. A total of 115 injections were given to 25 patients suffering from cervical, dorsal, lumbar and sacroilial spondyylosis. An estimation of the relief obtained, was based on absence of tenderness on palpation or percussion, increased mobility of the spine, and absence of nerve root irradiation of pain.

As noted the dosage was always the same, 20 mgm. of Hydeltra T.B.A. or prednisolone suspension, and the interval between treatments was kept the same, every seven days.

It is noteworthy that the subsidence of pain continued in these patients for periods of one to six months. Consequently, it has been gratifying to note that a suspension of prednisolone injected paravertebrally or near the articular facet is able to afford the noted relief in spondylosis with its nerve root irradiations of pain.

Summary

A total of 115 injections of Hydeltra T.B.A. or Prednisolone suspension, was made to 25 patients suffering from cervical, dorsal, lumbar and sacro-iliac spondylosis. Improvement, which consisted of absence of tenderness, increased mobility of the spine,

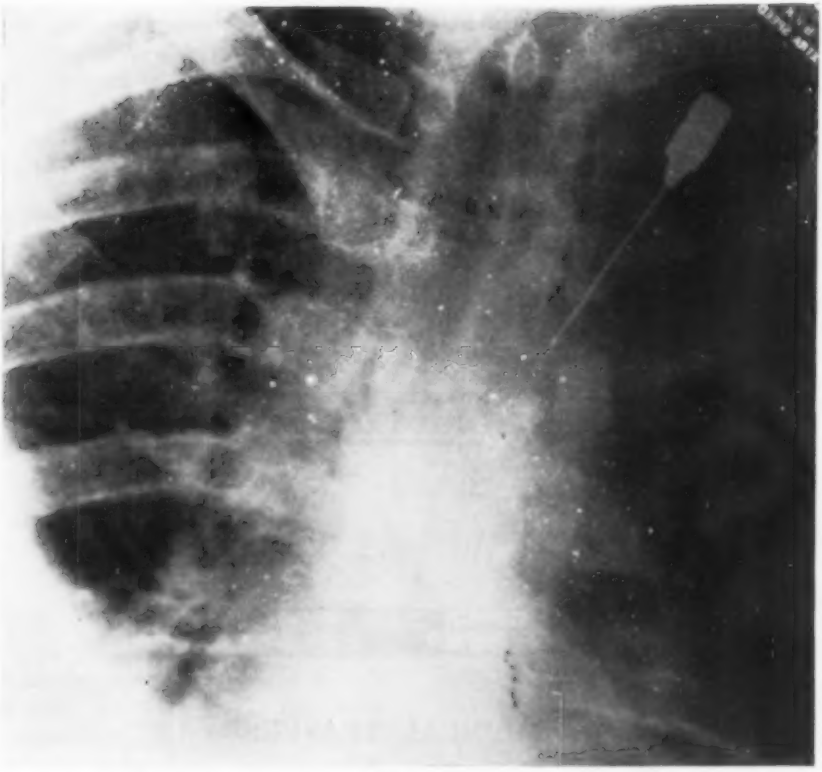


FIGURE 1

TABLE I RESPONSE OF PATIENTS WITH SPONDYLOSIS

SPINE	NO. OF INJECTIONS	DURATION OF DISEASE	INTERVAL OF TREATMENTS	NO. OF PATIENTS	PATIENT IMPROVED	LENGTH OF TIME FREE FROM PAIN
Cervical	11	1-5 years	1 week	2	2	5-6 months
Dorsal	47	1 month—5 years	1 week	9	8	1-6 months
Lumbar	19	5 years	1 week	3	3	2-3 months
Sacroiliac	38	1-3 weeks	1 week	11	11	2-6 months
TOTAL	115 Injections			25	24	

and absence of nerve-root irritation and irradiation of pain, occurred in 24 out of 25 patients.

The injections of Hydeltra T.B.A. or Prednisolone suspension, are safe, easily administered, and effective at the cervical, thoracic, lumbar and sacro-iliac articulations.

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"MEDICAL TEASERS"

A challenging crossword puzzle for the physician

page 51a

PAUL WILLIAMSON, M.D.

Dickinson, Texas

Treatment of Cerebral Arteriosclerosis

Since this disease is seen mostly in older people and sometimes is an immediate precursor of death it is often ignored from the therapeutic standpoint. A certain number—say over half—of these elderly patients can be helped by careful diagnosis and therapy. All that is required is an accurate appraisal of the mental and circulatory status followed by application of appropriate therapy.

As you know, the cerebral cells are very sensitive to oxygen lack. They often respond to oxygen want first with hyperactivity and second with gradually fading competence until function is lost altogether.

The changes in the cerebral arteries which result in diminution of circulation are too well known to be discussed further here. Suffice it to say that most people between the ages of 60 and 80 begin to show measurable lessening of the blood supply to the brain. Cerebral cells are nourished by capillaries, as shown in figure 1.

Let the dotted circles represent an average range of adequate diffusion in the presence of a normal cerebral blood flow. As you see, there are no areas of brain tissue that do not receive adequate nutrition. Now suppose the blood flow is diminished so that—while diffusion still occurs—it is much less efficient than before. The circles of adequate diffusion are made much smaller; as an overdrawn example, as shown in figure 2.

Cells in the lighter area will suffer oxygen want. As the circulation becomes ever more poor this area of oxygen deprivation enlarges. Finally the peripheral cells die.

Imagine if you will, a huge mechanical brain with literally thousands of tubes and transistors. Off to the side is a cabinet containing the power supply and the necessary drivers to actu-

ate the delicate calculating circuits. This power supply cabinet would be like the brain stem which contains the vital centers for respiration, etc. It would not be particularly subject to injury.

Now start removing from the main part of the machine one tube or one transistor at a time. Chances are you will disturb the more complex circuits first so that the machine shows a gradually lessening capacity to solve difficult problems. Finally it will get to the point where it can barely add two and two. At last it will break down completely.

The analogy to the human brain is exact. As cells are gradually killed off the more complex functions are first lost. Over a period of years all higher functions are lost and a state of vegetative existence obtains. Most of these people are fortunate enough to die before they reach this state.

Here again is the picture. Around each vessel there is an area of adequate nutrition, then an area of partial nutrition, then finally an area of non-functional cells, as in figure 3.

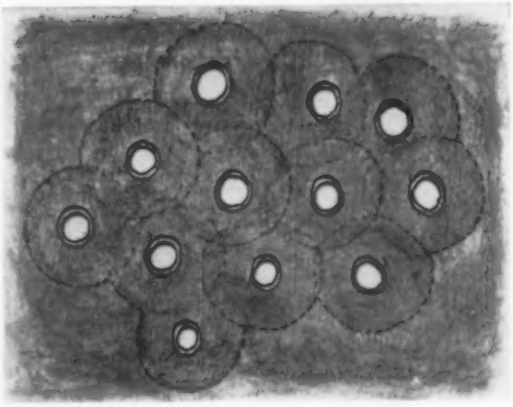


FIGURE 1

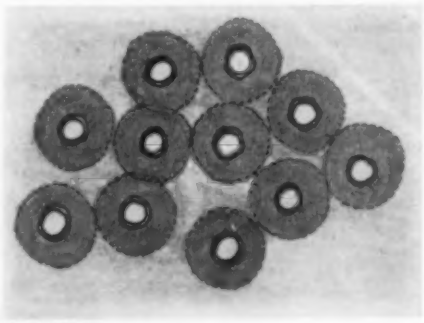
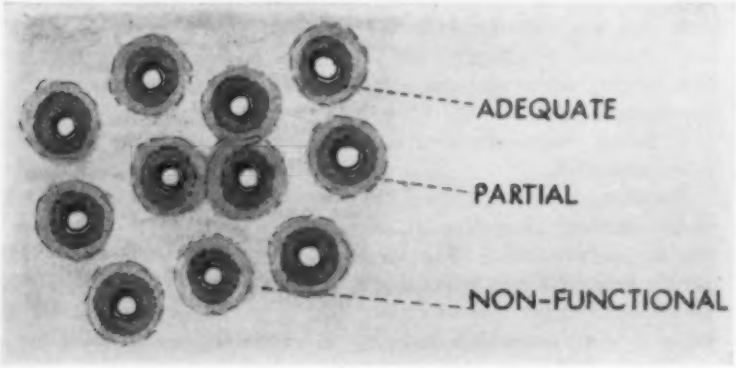


FIGURE 2

FIGURE 3



There is not much we can do about the cells in the non-functional areas. They have been injured beyond any hope of recovery. It is the cells in the "partial" areas that concern us. They are, for the most part, able to resume normal function.

The first thing to do is to try to evaluate the extent of the damage. Check first for the adequacy of the more complex functions in the intellectual sphere. Because it is easy to do we often estimate the integrity of the memory. An estimate of judgment or thinking ability is just as good an index of impairment but it may be more difficult to obtain.

For years writers have stressed the fact that recent memory is lost while memory for ancient events is sharply retained. Don't fall into this trap for the statement is just not true. The patient will do a lot of associative rambling and in this he will recall ancient events. Ask him a specific question and, unless there is a whole train of associations connected with the fact you ask about, he will not remember the answer.

Submit a problem to the patient that requires a little thought to answer. Like memory, intellectual functions are very complex and are among the first to go. When you see a patient that has only some clouding of thought ability and some memory gaps the outlook is excellent. These people, unfortunately, do not often come to the doctor. Everybody knows that older people show these things and they are accepted as a matter of course.

Emotional control seems just a little less complex and it is usually the next obvious function to go. These people are moved to tears or laughter by the most inane stimuli. I have a stupid story about a funny little dog who cut a lot of antics and then got run over by a car. If I tell the story to a child it is usually greeted with, "All right. So what? He was a funny little dog and a car ran over him. Now what?"

The same story told to a cerebral arteriosclerotic may provoke gales of laughter and bitter tears. Another way to seek out this emotional liability is to talk about something very near and dear to the patient.

Enough involvement to give loss of emotional control indicates a major change in the cerebral circulation. Even so, these people can be treated with some success.

The next step downward, usually involves loss of the more complex voluntary functions. Swallowing is by far the most frequently affected. It is true that minor changes in the response of skeletal muscle may be more often present but these are seldom noticed by the patient. The oldster with sufficient damage to affect swallowing has progressed to the point where treatment will not be very effective.

Before attempting to treat the cerebral arteriosclerotic it is necessary that a rough estimate be made of the state of his disease. If you want to be very scientific you may use a classification, like this:

- *Grade I.* Impairment of intellect and memory. Treatment is very often of great benefit.
- *Grade II.* In addition to the above there are readily appreciable emotional changes. Treatment is helpful but the main problem is the establishment of a life routine.
- *Grade III.* The above plus muscular dysfunction. Treatment offers

little. A rigid routine will be helpful.

There are 6 things that can be done to help such a patient. They are:

1. Vasodilitation with drugs.
2. Psychotherapy.
3. Physiotherapy.
4. Establishment of a life routine.
5. Proper diet.
6. Re-education.

All 6 should be considered in every patient but, of course, all can scarcely be applied at once. One must exercise a maximum of judgment in choosing essential therapy. Both the physical and financial status of each individual patient must be evaluated and considered. There is nothing I can say to help you make a decision which must be individualized. I can, however, discuss each type of therapy and exactly how one goes about applying it.

• 1. *Vasodilitation.* I don't think anyone really knows whether the vasodilators increase blood flow in cerebral vessels. The probability is that their effect is very limited. Even so, they do give the patient a flushed, warm feeling which he usually interprets as improvement. As in any other disease, the patient who thinks he feels better has gained a real therapeutic advantage.

In my experience the nitrites do not work as well as the higher alcohols. The effectiveness of either is greatly potentiated by the addition of small quantities of phenobarbital. We usually use the following prescription:

Elixir Roniacol® ℥iv
Elixir phenobarbital q. s. ad. ℥viij
Sig: P. p. a., ℥i t. i. d., p. c.

At least 80 percent of patients report that they feel much improved after taking this mixture for a few days. We can demonstrate objective improvement in only about 30 percent.

The most usual error in prescribing vasodilators for the aged is to give too large a dose. As you will notice in the prescription above I give about half the usual dose of both phenobarbital and Roniacol.® Older people just do not tolerate drugs in the same dosage prescribed for more robust adults.

Over a period of time the effect of the medication may become less. When this occurs, I usually switch to nicotinic acid for a month and then return to the original prescription. Whether this is a pharmocologic or a psychotherapeutic measure I cannot say.

The nitrites and xanthines are of little service in treating the cerebral symptoms. They may be needed for other purposes. In this connection you must remember the tendency for the older person to take far too many kinds of medicine. It takes tact to accomplish, but you must point out that medication should be limited to be effective. Recent investigations have indicated that alcohol is not such a good vasodilator as we once believed it to be. Nonetheless, two or three drinks a day will do much to make some patients having cerebral arteriosclerosis feel better.

A surprising great number of these people are alcoholics when you first see them and the problem of therapeutic versus foolish drinking always comes up. To me, it seems that much of their excessive drinking is due to poor judgment. These folks just don't think well and, as a consequence, they don't know when to stop. Usually you can teach the family to ration whiskey so that they get enough but not too much. One way to do it is to be sure the patient knows where the bottle is kept and then leave only one drink in it. Keep the true

supply secreted away. Most old people are fooled by this and cause very little trouble on this score.

• 2. *Psychotherapy*. This is probably the most important phase of treatment. As one gets older the horizons of life are gradually compressed. There is a slow but perceptable increase in self-preoccupation. Body functions that have been routine come more and more to occupy the patient's attention.

Often he gets very little chance to talk about himself. The family has heard his rambling, self-centered discourses until they can no longer stomach them. Just having a chance to tell someone about these 'problems' is a very important aspect of life. Be a good and interested listener and you will accomplish much.

You have heard that old people are 'set in their ways' and little subject to change. From the standpoint of formal psychotherapy this is true, but from the viewpoint of simple suggestion it is not. In my experience, geriatric patients respond better to suggestion than any other group. One reason for this is that they do not think accurately enough to see through it. One can tell a 40-year-old man that he is happy and get the indignant reply, "The devil I am". Tell a cerebral arteriosclerotic that he is happy and he may believe you. That is a foolish example but you should keep well in mind *and use* this susceptibility to suggestion. Repeated interviews during which you let the patient talk, and then reassure him and use suggestion to its utmost, will often be of great benefit.

• 3. *Physiotherapy*. There is no question but that properly administered physiotherapy can act as a general circulatory stimulant. At some time during the course of cerebral arteriosclerosis it will be of use to almost every patient. It is better not to try any physiotherapeutic procedure aimed directly at the cerebral arteries. Heat is primarily a vasodilator but it also increases the tissue demand for oxygen. I have been disappointed by the results in the few cases in which we have tried diathermy direct to the cerebral area.

On the other hand, the general circulatory stimulant effect of properly applied heat and massage often results in major improvement. In our own physiotherapy department I seldom prescribe an exact course of treatments. Instead, the patient is referred to the technician for three things:

1. Gentle heating, often with the infra red lamp, followed by:
2. Stimulant massage.
3. A series of very gentle muscle strengthening exercises.

In most instances the problem is to restrain your technician's enthusiasm. As mentioned before, old people just do not tolerate intensive therapy. We tell our technicians to decide what would be half the normal intensity and duration of treatment and then halve that. Treatments are usually ordered 3 times a week for 2 weeks, then twice weekly for 2 weeks, then once weekly for 2 months. Results from the clinical standpoint are surprisingly good. However, objective changes can be detected in only about 10 percent of cases.

We then face the problem of trying to decide just how this treatment benefits the patient. Undoubtedly there is some quickening of the general circulation. But this is not marked enough to account for the improvement seen in many cases. I strongly suspect that the frequent contact with a sympathetic

technician has a psychotherapeutic effect. Be that as it may, physiotherapy is definitely beneficial and should be used.

• 4. *Life Routine.* We believe this to be the most important part of treatment. It is very often neglected and its omission has caused the failure of many a treatment routine which was otherwise intelligently conceived. The patient suffering from cerebral arteriosclerosis is childish and set in his ways. He is not capable of the intellection required to meet even the simplest deviation from routine. A fixed and immutable life pattern is absolutely necessary for his comfort and convenience. This is why these people so often seem to improve when they are put in an institution and are allowed an orderly life. In many instances the same thing can be achieved at home.

Talk this over in great detail with those who take care of the patient. Tell them that he must be offered a chance to follow a constant pattern in everything he does. *He should not be forced* to conform. An attempt at this will only breed trouble. When given an opportunity to adopt a fixed pattern most patients will quickly and gratefully fall into routine.

The great error in the case of most people who take care of cerebral arteriosclerotics is to attempt to give the patient a great deal of choice in his activities. This serves only to confuse him. Your time explaining this point will be well spent. Go into the greatest of detail. Another factor to consider is that of companionship. So often these older people are completely alone and no effort is made to find friends for them. The excuse is usually that grandpa is a little off in the head, and that all he does is sit around and mumble to himself. This may be true, but don't forget, two old men can sit around and mumble at one another and be perfectly happy. They can argue politics or women and neither will notice the illogical and outrageous statements made by the other. Even if they want to blow off steam by shouting at one another a little bit there is no real harm done. There is not one thing you can do to prevent a cerebro-vascular accident, and the oldster might just as well have it while defending a viewpoint he knows to be in the right. Actually, I have seen few instances when just such a thing happened.

In arranging a life routine, one should be doubly careful to be certain that the patient does not get overly tired. Fatigue is ill tolerated by the cerebral arteriosclerotic. We have not analyzed our statistics, but I have the distinct clinical impression that more such people are brought to grief by over fatigue than by any other cause.

Another point to remember in arranging this life routine is the detailed supervision of person that is required. These people have no judgment at all about personal hygiene or precautions against disease. They may allow themselves to become filthy; exposure to cold is ignored, etc. A constant firm but gentle control over such things must be exercised.

• 5. *Proper Diet.* Nutrition in the elderly is always a problem. Cerebral arteriosclerosis frequently blunts the senses of smell and taste so that food becomes less appetizing. Caloric needs are decidedly less. In addition, there is some loss of function in the gastrointestinal tract. Both digestive and absorptive functions are impaired.

Appetite involves intellection which is a primary deficiency in the patient suffering from cerebral arteriosclerosis. Add these things together and you have the makings of a serious nutritional problem.

Explain to those responsible for the patient's care that there is no need for large quantities of food, but there is a critical need for a well-balanced diet. There should be few tough, fibrous foods for the average oldster cannot chew them. The often mentioned 'appetizing arrangement' is probably more important to the dietitian than to the patient.

There are certain things that should be daily items in the diet. A list of them should be furnished. They are:

1. A glass or more of milk.
2. A glass of fruit juice or one serving of fresh fruit.
3. One serving of meat.
4. One serving of green vegetable.

No indication exists for being rigid about what food is to be taken and when. Eating is about the only pleasure left to some cerebral arteriosclerotics. As long as they do eat the most important point has been gained. If they can be taught to take an adequate diet so much the better but it isn't worth torturing them about.

Dietary supplements are sometimes helpful but often over prescribed. It is true, for example, that the administration of vitamins may be a help. In heroic dosage they are unnecessary, and often harmful. A standard brand supervitamin capsule once or twice weekly is sufficient unless signs of true deficiency exist.

Much more important is the problem of adequate protein intake. A dietary supplement of one of the protein hydrolysates in reasonable dosage may do much more to improve nutrition than any other product. A half once once or twice daily is enough. Low cholesterol or low salt diets may have some preventive function but are useless as therapeutic methods. In most patients having cerebral arteriosclerosis the damage is irreversible. A stringent dietary regimen makes the patient miserable while accomplishing nothing.

Water intake poses a dual problem. Older people do not drink as much water as do those of middle age. They may literally forget to drink unless reminded to do so. It is a good policy to offer them a glass of water every hour or two until late afternoon. Since they are prone to have poor control of urine one should reduce their fluid intake after 4 p. m.

6. *Re-education.* Many such patients exhibit a partial loss of function in areas of skeletal muscle. When the patient retains a sufficient degree of insight to cooperate, muscle re-education may be attempted. Unfortunately only a few patients are suitable for this therapy.

Proper treatment takes a well-trained technican and is expensive. Only rarely will the gain justify the expenditure of time and money.

Summary

In considering this treatment problem you must remember several things. First, rigorous therapy of any kind seldom does good and often does harm. Thinking up forty things to do for such a patient and then prescribing

them with great vigor is only likely to kill him. Instead of this, devise two or three simple measures and be somewhat lenient in their application.

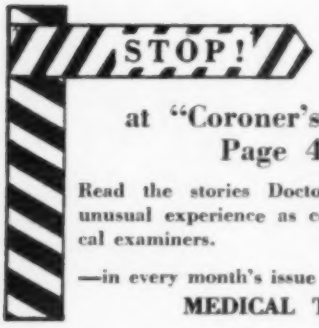
For some reason, we all avoid discussion of the second point. We like to say that human life has no relationship to money but this is untrue. There is a very definite economic value to life—particularly as regards the older life. By spending thousands of dollars one may be able to prolong life for twenty-four hours or twenty-four days. Most people are not willing to pay the price. Each doctor must solve the problem in his own way. I usually discuss it frankly with the patient's family. Often they are at first carried away by emotion and demand that the most advanced procedures be carried out "no matter what the cost". Within a few days common sense takes over and they make a realistic approach to the problem.

Before you get over-enthusiastic about any regimen make sure it is going to be worth what it costs. Certainly, I imply no neglect of the patient for such is inexcusable. I am telling you to be a realist.

Don't be fooled by temporary waxing and waning of the symptoms. This is a normal process in cerebral arteriosclerosis. It may look as if therapy has done much when, in reality, it has had little or no effect.

One other point: write down the routines you want these people to follow. You would be surprised how often directions are misinterpreted or mixed up by intelligent, well-meaning people. A written instruction sheet leaves little room for doubt, or argument.

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Page 43a

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MEDICAL TIMES

SPECIAL REPORT

Early Management of a Patient With a Stroke

DONALD A. COVALT, M.D.

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This presentation will not be concerned with the medical management of patients with cardiovascular disease. Every physician has his own routine, and there are many variations such as the question as to whether to use anti-coagulant therapy or not. Many articles are available on this important phase of treating the patient.

The purpose of this paper is to outline those rehabilitation techniques which should begin early and which will help to prevent contractures and atrophy of muscles which occur so quickly with these patients.

Proper positioning of the paralyzed extremities is most important and will save weeks and even months of physical therapy. Small pillows should be utilized to keep the paralyzed arm away from the chest. A greater number of small, pediatric pillows rather than few large adult pillows should be used. The arm is positioned in order to prevent contracture of the shoulder, the holding of the arm close to the chest and the inward rotation that always takes place with these patients. Enough pillows are used to keep the arm well away from the chest so that each joint is positioned higher than the preceding one. In other words, the elbow joint is positioned higher than the shoulder joint, the wrist joint higher than the elbow, and the fingers are positioned higher, and a small roll of bandage with padding may be used to keep the thumb away from the hand and the fingers barely flexed.



FIGURE 1

Such positioning of the upper extremity helps to prevent the edema of the hand so often seen in these patients.

The lower extremity must also be carefully positioned. Without positioning, the leg falls into outward rotation with a toe drop. This is not the time for a neatly made and tightly boxed bed. Bed linen should be loose and should not drag on the toes. Sand bags are positioned at the thigh and below the knees on the lateral aspect of the leg in order to keep the lower extremity in a neutral position. Other sand bags may be used to keep the foot at a right angle to the leg to prevent toe drop caused by shortening of the gastrocnemius muscle. A foot board can be utilized to keep the foot at a ninety degree angle but the sand bag is usually easier to procure and is probably more satisfactory. The patient is now in an ideal position to prevent complications. Minor degrees of adjustments can be made from time to time to keep the patient comfortable. (Fig. 1)

The clinician must decide when the patient's condition will allow a more active program. In our experience, patients with a hemiplegia caused by hemorrhage can usually be started on a more active program within five to six days after the acute onset; patients with a thrombosis or an embolism can usually be started earlier, within two or three days. Of course, each case must be individualized, and only the physician-in-charge of the patient can give the go-ahead-signal for a more active program.

When available, a registered physical therapist should be utilized because they have had training and experience in the treatment of this type of patient. However, a nurse or a member of the family can be instructed to carry out the rather simple exercises which are necessary to maintain the tone of the muscles, prevent contracture, and to help increase the strength of weakened muscles.

The physician-in-charge should write a very detailed prescription of the exercises and stretching that he desires.

The therapist should begin by taking the paralyzed extremities through a complete range of motion of each joint usually starting with the upper extremity. The shoulder is taken through a complete pattern of range of motion



FIGURE 2

which includes flexion of the shoulder, abduction and adduction, internal and external rotation (Fig. 2) After this has been completed, the shoulder should be taken through a complete circumduction. The arm is brought to the side and the elbow is flexed and extended. The lower part of the arm is placed in supination and then taken through to pronation and return. The hand is flexed at the wrist joint, then extended and brought back to a neutral position and then moved medially and again laterally. The joints of the fingers of the hand must be taken through all ranges of motion. All of these exercises are done by the therapist (passive motion).

Going on to the lower extremity, usually starting at the hip joint, the leg is taken from adduction to abduction the leg flexed at the hip joint and brought back to extension. The leg should be taken through internal and external outward rotation. The leg is raised and the knee joint is flexed and brought back to extension. (Fig. 3) The ankle joint is taken through all of its motions with particular attention to the dorsiflexion of the foot. The heel cord should be stretched by cupping the heel of the patient in the therapist's hand and placing her forearm against the ball of the foot exerting sufficient pressure to stretch the heel cord and bring the foot up to at least a ninety degree angle and past, if possible. These exercises should be carried out once in the morning and once in the afternoon.

In a very few days, as the patient improves, the program should be increased, and the patient should be urged to assist in his exercises. Using the elbow as an example—the patient should

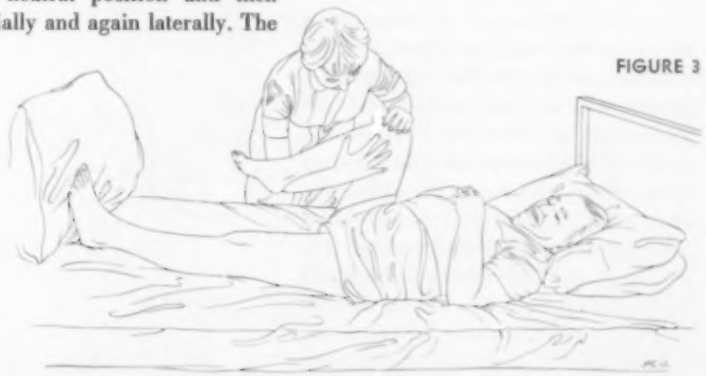


FIGURE 3

be asked to try to flex the elbow as far as he can (tell the patient to bring his hand to his mouth). (Fig. 4) If he cannot go through the complete range of motion, then the therapist will complete the motion. The therapist should then instruct the patient to try to stretch the elbow out using the same technique as above, and, if the patient cannot complete the motion, the therapist, again, must go through the entire range of motion. This should be done for every joint on the affected upper and lower extremity.

As the patient becomes more alert and his muscle power returns, he must be encouraged to utilize more and more of his own muscle power.

Again, the physician must decide how soon the patient can be allowed to sit up. These patients, usually in the older age group, lost their sense of sitting and standing balance very quickly, unless they are brought to a sitting position as soon as possible. Upon receiving clearance from the physician, the therapist will assist the patient to sit up, first, with his feet still in bed and, later, by hanging his legs over the edge of the bed. It is important to have the patient in a *low bed* rather than a high bed. There is nothing worse than a patient who has had a stroke to be sitting on the edge of a bed, his feet dangling over a little box with the floor appearing to be many miles away. Put the patient in a low bed with his feet firmly on the ground and widely spaced apart. He should be taught sitting balance with his good arm extended, his hand flat on the bed and his two feet on the ground and the therapist standing by his affected side. (Fig. 5) He can be allowed to sit five to ten minutes and will quickly increase his sitting time.



FIGURE 4



FIGURE 5

FIGURE 6



FIGURE 7



The above exercises and sitting position should be done twice daily, once in the morning and once in the afternoon.

It must be reiterated that it is much better to have the patient sitting on the edge of the bed preserving his balance with his good arm than it is to transfer him to a more comfortable over-stuffed chair where he does not have to do any work. Care must be taken by the therapist to see that the patient does not fall. Sitting time should ordinarily be increased rapidly.

Again, upon orders from the physician, the patient is allowed to try to stand. Ordinary ladder back kitchen chairs are very convenient for this. These are placed at the bedside with the backs of the chairs toward each other, with the patient sitting on the bed, between the two chairs. If the hand is completely paralyzed, it will be necessary to bandage it lightly to the top of the back of the chair. The good hand grasps the back of the other chair. The therapist should stand in front of the patient making sure the patient's feet are widely spaced apart. To prevent the affected knee from buckling, the therapist exerts pressure against the patient's knee. (Fig. 6) With the therapist in front of the patient, the patient is encouraged to maintain standing balance. The standing time may be very short to start with, but can be increased rapidly until it is felt that it is perfectly safe for the patient to stand alone, but, always in the presence of a therapist. (Fig. 7)

By this time, a manual muscle test should be made of this patient's upper and lower extremities in order to determine what type of braces are necessary. If the quadriceps muscle is weak or absent, it will be necessary to order a long leg brace. The prescription should

be for a double bar long leg brace with box lock at the knee joint on the medial bar with a stirrup attachment, and a ninety degree stop at the ankle joint. (Fig. 8) Even if the quadriceps muscle is strong, the majority of these patients have weakened and absent musculature below the knee, which usually results in a toe drop, and an inversion of the foot. These patients should have a short leg brace which is prescribed as follows: Double bar short leg brace with a stirrup attachment at the ankle joint and a ninety degree stop. (Fig. 9)

As soon as the brace is delivered, it is time for the patient to walk and this can be repeated with the ladder back kitchen chairs. The patient should be taught to walk in a reciprocal manner. The therapist stands beside the patient on the affected side and—say, we have a patient with a right-sided hemiplegia — the therapist stands beside the right chair and advances the chair approximately one foot and asks the patient to bring his left leg through. The patient should then be able to advance the left chair with his unaffected left hand and take a step at the same time with his right leg. (Fig. 10) This is the normal manner of walking. As the left leg swings forward, the right arm swings forward. If parallel bars are available they can be utilized. Within a matter of a few days or a few weeks, he should be able to be transferred from the chairs or the parallel bars to a cane and walk with assistance on a level surface. The patient must be taught to climb steps and curbs. The doctor's prescription should also include muscle re-education for all muscles in the affected extremities of fair grade or less and resistive exercises for all muscles of fair plus and above.

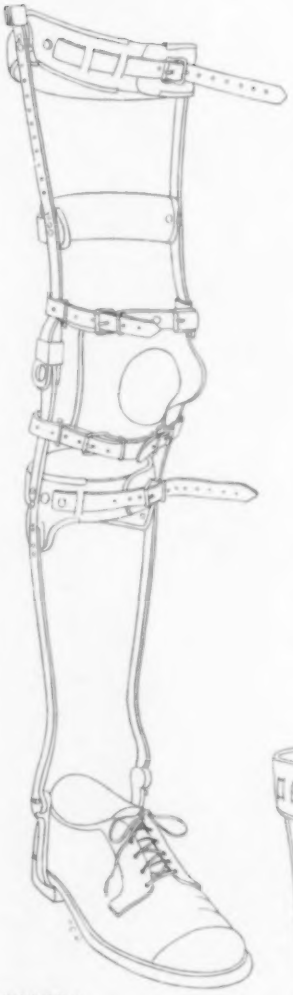


FIGURE 8



FIGURE 9

For those patients who do not recover completely and the majority of these patients do not, it will be necessary to teach the patient the "activities of daily living." Many patients with a completely paralyzed upper extremity have been taught to dress themselves, feed themselves, take care of their personal hygiene, walk and become completely self-sufficient. The amount of instruction necessary depends upon the amount of residual paralysis.

Those patients who have a speech disturbance can best be handled by a competent speech therapist. If this is not available, the book, Aphasia Rehabilitation: Manual and Work Book, published by the Institute of Physical Medicine and Rehabilitation, New York University-Bellevue Medical Center, can be procured and used by a nurse, or even a member of the family.

Many of these patients have tremendous emotional problems. There is a natural depression which follows such a disaster. They respond to a lot of "tender loving care" and understanding. However, the patient and his family must be made to understand that the patient himself is the most important member of the rehabilitation team. The most important part of his therapeutic program is what the patient learns to do for himself and not what the doctor, therapist or family do for him.

Early, many patients have a tendency to laugh or cry at the slightest provocation. The patient and his family must be given to understand that this is perfectly natural and that this manifestation will improve as the patient improves. The laughing and crying is a thalmic disturbance which usually disappears entirely.



FIGURE 10

Most patients with hemiplegia should be fully trained within a couple of months. Some of the more severely paralyzed patients take longer, of course.

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The Problem of Contact Dermatitis

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Contact dermatitis is probably the most common single disease of the skin seen by the practicing physician. In my experience, it ranks far ahead of acne and atopic dermatitis, so far as number of patients is concerned, and is apt to prove difficult of diagnosis and more difficult of treatment unless certain principles are adhered to, as hereinafter outlined.

The first dictum which calls for emphasis is that sage advice to the physician: "Listen to the patient; he is telling you the diagnosis." Thus, after asking the routine questions,[1] with regard to previous skin diseases, present work, substances exposed to or handled at work, substances used for cleaning at work or at home, and exposures at home (hobbies, handiwork, or helping about the house), it is my custom to ask the patient if he knows what makes his skin itch or burn, or if he knows of anything that "makes his skin feel funny" (to use his own terminology). Then I warn him, as his skin improves under treatment, that he is to pay attention to anything that makes his skin itch, feel hot, burned, or anything that causes it to become reddened again. In this connection, I cannot forget the woman who presented herself with an eruption of her hands of 35 years duration, who, when I asked her what caused her to itch, replied "hamburg juice," adding the information that every time she made hamburgers her hands would itch and burn. Soothing compresses such as I will describe, plus an avoidance of handling beef, cured this woman's long-standing eruption in a short time.

Nor will I forget the man who had an eruption on the forearms, who, when I asked him if he had ever had an eruption before, said "Yes, 12 years ago I had a similar eruption, which was due to dog hair, so that I had to get rid of my dog. About two years ago, I bought another dog, and this rash developed about six months ago." This patient had a positive test to the dog hair, and, having rid himself of the dog, was cured with soothing compresses.

Some people, however, are not so observant nor helpful in making the diagnosis, and then the physician must undertake palliative treatment, warning the patient that he probably will break out when he contacts whatever has caused his rash, and that he is to pay strict at-

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tention to whatever causes him to break out.

Dermatoses of the face are commonly due to hot solutions used, or to vapors, or dusts that are evolved, in industrial processes. Dermatoses of the eyelids are commonly due to nail polish. Dermatosis of the hands are usually seen from substances handled, and may vary from such substances as solvents, detergents, to the rarer cases of dermatoses from handling lettuce, celery or hamburg, all of which can be proved by proper patch testing. Most textbooks say that the patient's rash is usually on the exposed parts, and there are those who would have you believe that a man must break out in all places where he contacts the substance. Nothing is further from the truth, however. In my practice, one worker has a rash on his face and chest, with no eruption anywhere else, which has been proven to be due to the rubber that he handles at work. A second rubber worker broke out on his legs first, and two months later his hands broke out, all from the solvents used in the rubber cement that he handles. Then too, every physician is aware that many women wear six garters, but that only one, two or three of them will cause her to break out when she is sensitive to nickel. I have reported a case record previously of a girl who put perfume on two arms, and only broke out on one arm. Therefore, while we naturally look for the location of the eruption on the usual places of contact, we must not forget that unusual places are to be found as well.

Here it should be pointed out that, while it is wise to ask the patient what he has worn, used or touched that is new, the cause of contact dermatitis commonly is something that the patient has been handling, doing or wearing for years, and which suddenly produces a contact dermatitis. At the moment, I am caring for a rubber worker who handled rubber cement for 32 years before he developed an eruption of his hands, and I have cared for a man who worked 25 years in a publishing house, washing parts with thinner, and who broke out after 25 years with contact dermatitis caused by the thinner. I have another patient, a worker in a newspaper printing plant for 17 years, who broke out from the type ink at work, and who subsequently broke out while away from work merely from handling newspapers purchased from a newsstand.

If a patient has purchased a new box of detergent, a new cosmetic, or new stockings, etc., the physician must remember that such substances may cause eruptions even though many manufacturers of such products will categorically deny that their products can cause eruptions. I have been amazed at the letters that some patients have received after they have written to a company suggesting that they had broken out from their product. If the patient believes he or she broke out from some particular product, it is only proper to perform properly diluted patch tests to ascertain the cause of the dermatitis. The Committee of Industrial Dermatoses of the American Medical Association's Council on Industrial Health recently published an article giving full information on patch tests.[3] This is a useful article which should be referred to by those interested.

Having emphasized, then, the multiplicity of causes of contact dermatitis, whether of home origin or workshop origin, we must next come to the most

common cause of contact dermatitis, namely, overtreatment dermatitis. By overtreatment dermatitis is meant that a patient started with one eruption, to which some medication was applied, which made the patient's condition worse. The complaint that is so frequently heard by the specialist is "I had a little rash on my ankle (or some other part), and Doctor So-And-So (or the druggist, or a neighbor, a nurse, or some-one else) suggested that I try Proprietary Salve X. I used this for three or four days, and now I have a rash all over me."

Why is it wrong to put a salve on an acute dermatitis, and why do people get worse when such is done? Well, there are at least two problems involved here: First, when the skin is inflamed, it is trying to lose heat. A red skin is hotter than normal skin, and anything that serves to relieve the heat soothes the skin, whereas that which defeats the purpose of the skin makes it worse. Salves, by their occlusive nature, tend to defeat the purpose of the skin by not allowing heat to be dissipated. Secondly, if the original contact substance is still on the skin, it may well mix with the salve and spread further on the skin, and the salve may not allow proper washing or removal of the irritant, and so we have irritation upon irritation. Other factors, such as the increased absorption by ointment bases, and sensitization to the ointment itself, should also be considered.

The specialist finds that he spends as much time telling the patient what not to do, as he does, as to what to do. Thus, the patient with an acute dermatitis is told not to take hot baths, not to get into the sun, is not to apply oil or grease, and is to keep cool; and if the eruption is on the hands, the patient is advised to wear cotton gloves under rubber gloves and to use a fine-fabric detergent and cold water on doing the dishes and general household cleaning.[3] Cloth gloves covered by rubber gloves should not be worn for long periods of time, nor should the hands be put into hot water while they are worn.

There are many reasons why the patient's rash does not clear up when he is removed from his work. I have enumerated 24 such reasons in a prior paper,[4] but some of the most common were:

(1) Dermatophytosis of the feet, which makes any hand eruption difficult to control;

(2) Exposure at home to additional irritants such as ammonia or gasoline;

(3) Failure to follow the treatment outlined by the physician, due to conflicting advice received from members of the patient's family, a well-meaning nurse, etc.;

(4) "Hardening", or increasing resistance to treatment due to long exposure; and

(5) Superimposed sensitization dermatitis from systemic treatment of secondary bacterial invasion, or superimposed vesicular dermatitis from penicillin given for respiratory or other unrelated diseases.

Having warned the patient what not to do, or, really having warned him about the dangers of overtreatment, then the task of proper therapy is at hand. I find that written instructions are best, for, having told the patient five or six things not to do, he or she promptly forgets them, so the only alternate is to have written instructions prepared.

Since most contact dermatoses are acute dermatoses, i.e., they are breaking out with new lesions within a matter

of days, only the mildest of compresses are used. For acute dermatoses of the face or genitals, one teaspoon of salt in a quart of cold water applied on a soft face cloth every hour or so is very soothing, especially if followed by the application of a soft powder such as cornstarch or a baby powder.

If there is fear of infection or severe dermatitis, a teaspoon of one of the quaternary ammonium compounds in a quart of cold water is often soothing and helpful.

Cold boric acid water has been used for the same purpose, and Epsom salts in water may be used as well, adding about two tablespoons to the quart in each case.

If there is vesiculation, aluminum acetate solution—one or two tablespoons to the quart of cold water, applied every two hours—will dry blisters quite rapidly. If there is much infection, I prefer Dalibour water[5] to other antibacterial agents. Dalibour water is made by writing a prescription to read:

Copper Sulfate	5.0
Zinc Sulfate	15.0
Water	QS 120.0

This is then diluted, a teaspoon to a quart of water, and is applied as a compress to pyogenic lesions. If there is too much pus for copper and zinc sulfates, I frequently use one tablespoon of the ordinary household bleach — sodium hypochlorite—to a quart of cold water, have the patient bathe this on for two or three minutes, follow by rinsing with cold water, and then apply the diluted Dalibour water for two or three minutes. This combination of bleach, followed by the Dalibour water, is used morning and night, and the Dalibour water is used several times inbetween alone, as a compress.

The patient is to be told that dryness and cracking, and a feeling of "parchedness" are to be expected. When the patient's skin becomes cracked, then the patient is told to increase the time interval between the compresses, and is allowed to put plain zinc oxide paste in the cracks with a toothpick. At this stage, the patient is not even allowed to apply zinc paste all over the hands. This recalls to mind the case of a worker who had a dermatitis on his hands, who had been treating with a dermatologist, and who had been soaking with cold aluminum acetate solution correctly during the day and who had been applying zinc oxide paste all over his hands at night. He had been treated for six months with this method. After being seen in my office, the nurse at his plant telephoned to tell me that the management was not going to let the man return to his original specialist, but that I was to take care of him. She asked if I would give him special instructions for the weekend. I told her to continue the aluminum acetate soaks, but to discontinue the paste. No other change in his treatment was made subsequent to this, and his hands cleared in six weeks. Thus, the patient must be kept overly dry for from 17 to 21 days before even zinc paste is tried on a small area. If the paste, when first applied, produces breaking out in the area around the crack, then 1% Gentian Violet is applied to the cracks, and even the paste is not used. After 2½ to 3 weeks, if the lesion has dried, then he is allowed to try zinc oxide paste on an area the size of a quarter. If no redness or blisters occur, the patient is permitted to put it on one time, but not to put it on a second time until the physician sees the results of the first application, for the pa-

tient himself is not a good judge of the results of therapy.

Other modalities of treatment, such as ultraviolet light, staphylococcus vaccine, or toxoids are sometimes necessary. In my experience, antihistamines by mouth have not relieved itching, sedatives do not induce sleeping, nor do I believe that the steroid hormone should be used in acute contact dermatoses, due to the fact that these skin eruptions can be allayed by other means which will effect a more permanent cure.

Summary

Contact dermatoses are increasing. Proper therapy is outlined. The hazards of overtreatment are stressed.

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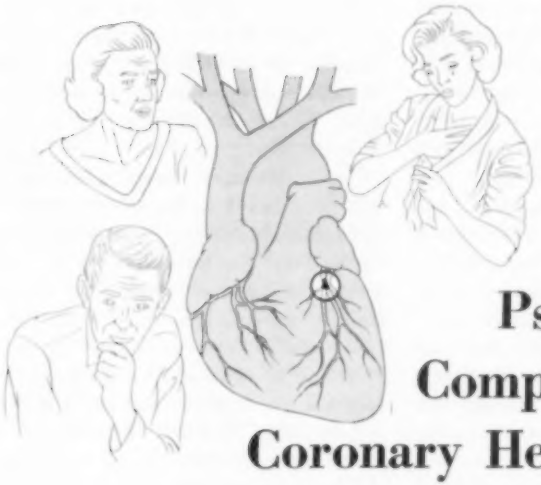
DEFICIENCY OF ANTIHAEMOPHILIC GLOBULIN IN HETEROZYGOUS HAEMOPHILIC FEMALES

"Two sisters with a significant haemorrhagic tendency were investigated. They proved to have a coagulation disturbance due to a deficiency of antihaemophilic globulin. This deficiency was revealed by thromboplastin-generation and prothrombin-consumption tests.

"The patients were the daughters of a haemophiliac and therefore were transmitters of the disease. The male affected members of the family had mild haemophilia."

A. S. Douglas and I. A. Cook

The Lancet, Vol. CCLXXIII, No. 6996, P. 619



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Psychological Complications of Coronary Heart Disease

The virtual epidemic of coronary heart disease which has prevailed in this country for a number of years has evoked almost endless discussion of the various aspects of the disease in both professional and lay publications. However, it is surprising to note an omission of one of the most important aspects of the disease, the psychic trauma which the coronary patient experiences. This aspect of the condition comes into being after the first week or ten days of onset of illness.

In this paper, I will not dwell at any length on the many other facets which may be concerned with this illness such as diet, tension, overweight, heredity, or how to prevent an attack or ward off another one. These are amply discussed all along by people who are far better qualified to do so than I.

As to the psychological component, I am quite sure that only one who is a victim of this dread ailment can speak with full authority. I, being in this category, shall attempt to do this, based largely upon my own experience, with the profound hope it will be the means of affording far deeper understanding on the part of the physician and through him the teaching of the family of the coronary patient such undersatnding.

The emotional symptoms quite naturally vary with the individual. The patient may burst out crying for no apparent reason. Some thoughtless remark by a visit, attendant, or relative may precipitate an emotional episode. As often as not the patient himself has no idea as to why he is crying. A cloud

of despair from out of nowhere seems to engulf him. A few minutes later he is over the spell and wonders why he has been so upset. He feels disgusted with himself as if he is being childish. He is at a loss to explain his outburst. This is the crucial moment when it is all important that the wife, especially, and any others in attendance, must be very careful not to say things which will hurt the patient. No ridicule is ever to be tolerated. The man is ill and the slightest unkind or careless remark plunges him into deeper despair.

It has been my good fortune to be surrounded by ideal personnel but I have known others whose recovery may have been hindered because those who are charged with their care did not possess understanding and knowledge of the illness. I am most anxious that anyone who will ever have anything to do with a coronary patient understand the emotional aspect of the illness in order to spare the patient all of the anguish possible. A coronary attack ushers the patient, in a drastic and dramatic manner, into a new concept of life and its values. One day he is living a normal perhaps even a somewhat carefree life, certainly with no more than the accepted and expected portion of life's problems. The next he is prostrate in an oxygen tent battling for very life itself. All of his carefully laid plans for his family and himself are suddenly and frustratingly changed, or potentially so. Almost certainly, things will never be the same again even though admittedly many people do make excellent recoveries. Of fundamental import is the realization that certain forms of work which are felt to be necessary may have to be curtailed or omitted entirely. Time is required to become reconciled to the necessity of taking the second best in life and utilizing it to the greatest advantage.

There arise in the mind many questions such as care of the family, finances, future ability to resume work and how much, what will be one's capacity to become efficiently psychologically adjusted, etc. The fear of impotence, conscious or subconscious, may well be a factor in the psychic trauma incident to this illness. In most instances the patient can be reassured on this score. As recovery progresses, almost sure to arise is the age old question "Why did it have to happen to me? If it had to happen, why not to someone else who is older, and who has less responsibility than I?" Brooding over these questions or feeling sorry for one's self is certainly to be avoided if possible.

Nevertheless, there are times when such thoughts thrust themselves to the forefront of the conscious, and they have to be dealt with. Remember, the individual who is burdened with these questions is ill and he needs help, not censure or ridicule.

I have some answers to my own perplexing situation and will briefly review my experience. The day before I became ill was supposed to be my "day off," so to speak, but a physician does not really have a "day off." I made fifteen home calls, went to the hospital fifteen miles away to visit a young friend, bought a new car, and made a rather long talk to a church group. It was after the church meeting that I made six of the calls, completing them at about 11:00 p. m.

At 2:30 a. m., three and one-half hours later, I was seized by a rather

typical coronary attack. There was no question about the diagnosis and there was no other physician in town at the time. I was carried to the hospital fifteen miles away as rapidly as possible.

So you see, one day I was busy as could be at my work, and the next day I was in an oxygen tent knowing full well what was going on, and that even if I lived, which I felt all along I would, there would be drastic and permanent changes in my life. At this stage and for several days thereafter, the emotional reaction did not reach the conscious level. It is only after convalescence begins in reality that the psychic problems come to the fore. It was then that I began to fully realize that many changes must occur. I would have to give up much of my work. In fact, it was problematical as to just when I would be able to return at all. I knew I had done the best I could for my family in the way of insurance protection, but there arose the more important question of human values in the form of what would the future hold for my family as a whole and my small sons in particular. Suppose I did not recover, and suppose even if I did, but could do little work, what would be the effect on their lives. I knew perfectly well their mother would do all that was humanly possible, but would she be able to cope with the problems of adolescent boys as well as the both of us together could. Many questions concerning the welfare of the family came into mind.

As to the less important things, I knew the new car would have to go back to the dealer and that my deeply secret desire to one day possess a Cadillac could certainly never be realized. I had to find answers to these problems and so will thousands of other men. In spite of all the answers that I or anyone else may give, we who have this condition need from the beginning, kindly and sympathetic understanding on the part of all who are associated with us, especially those who are emotionally closest to us in normal life.

In working out the solution to the problem of readjustment to a new way of life, three things came to my mind and I find that I have to repeatedly recall them to reinforce what is an ever present tendency to become weak in faith and thus discouraged or even despondent. The first thing that occurred to me in the process of becoming reconciled to my new state was to think of the disciples of Jesus. They were men who either had little of a material nature or gave up what they did have. Who would not be honored to be able to exchange places with one of them? When the question "Why did it happen to me?" arises, I recall the teaching of the book of Job wherein we are reminded that we are in no position to question the great Master plan of God, and that He knows what He is doing, whether we can ever see it or not.

Even further I recall the teaching of Jesus when one of the disciples questioned Him as to his own future and inquired furthermore what was the plan for John. The Lord's answer to him in essence was that it was none of his affair what happened to John but his responsibility lay in doing His commands. In brief, it is not my business to question what the Master plan holds for another but my task is to make the most of what I have, or have left.

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Education for Childbirth





A Report of 3177 Consecutive Deliveries in Private Practice

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Education for childbirth can denote a variety of procedures and concepts. In this presentation it means a preparation of the mother for childbirth through active participation in classes which include discussion and exercises. The successful culmination of this learning process is enhanced by proper support of a nurse or nurses who have been specially trained to give the right kind of support during the patient's labor. Most of us in this country prefer the title "Education for Childbirth" for our method rather than "Natural Childbirth". The reason for this is because the term "Natural" has confused so many people—both professional and lay. To these confused people, it has meant a return to a primitive type of labor and delivery with no opportunity for analgesia and (or) anesthesia. It was never the intention of the now famous Dr. Grantly Dick Read[1] to imply that no support with drugs should be given to a woman in labor. Why this confusion should still exist is amazing to me. Yet it does, and therefore a better term for the method is Education or Preparation for Childbirth. If we would all use this term I am sure some of the few remaining critics would accept the concept as being one of a logical adjunct in our care of the expectant mother. It should be looked upon as a refinement in obstetrics. It is something we have added which makes having a baby a pleasure, rather than an ordeal, for the family and for the professionals caring for that family.

A brief outline of the program I use, is presented to show how it can be carried out in private practice. If the individual practice is not large enough several doctors can combine their obstetrical patients and have a nurse teach the entire group. Such a method has been used in my own community.

The nurse teaching the classes should have special training on how to properly conduct the classes. My own nurses were sent to Grace New Haven Community Hospital in New Haven, Connec-

ticut. These nurses give a series of four two-hour classes. The first three classes are usually given in the second trimester and the last one about four to six weeks prior to the expectant date of delivery. The anatomy and physiology of the female reproductive system is taught. Development of the baby, labor and delivery are discussed. The nurse tries to follow an outline just enough to be sure that all the subjects are covered, but we try to let the women in the groups decide to a great extent the subjects they wish to be discussed. About 30 to 45 minutes of each two-hour class is spent in teaching or reviewing the exercises.

The fourth class is a review of labor and delivery and information about when and where to call the doctor. Hospital procedure information is also carefully imparted to the patients. Also, the exercises are again checked by the nurse and special attention is directed toward proper abdominal breathing, which we feel is a great help during labor. We try to limit the number of patients in each class to twelve or less; a group that is small enough to allow time for individual instruction by the nurse.

There has been controversial discussion as to the value of the exercises. I believe they are beneficial in several respects. First, it gives the patient something to do about her own pregnancy. She feels she is aiding herself to be more healthy and is probably helping her future child to be strong and healthy. She feels that her skeletal muscles are being "toned up", as some of them have told me. Secondly, the exercises seem to make these women have better posture. They walk rather than waddle and so have less discomfort during pregnancy.

TABLE NO. 1

Total No. of mothers delivered	3177
Total No. of babies delivered (37 twins)	3214
Multiparas delivered	2221
Babies from Multiparas (29 twins)	2250
Primiparas delivered	956
Babies from primiparas (8 twins)	964

TABLE NO. 2 AVERAGE HOURS IN LABOR FOR PRIMIPARAS

1st Stage	7 hr. 29.0 min.
2nd Stage	26.2 min.
3rd Stage	4.5 min.
TOTAL	7 hr. 59.7 min.

TABLE NO. 3 AVERAGE HOURS IN LABOR FOR MULTIPARAS

1st Stage	4 hr. 10.0 min.
2nd Stage	10.4 min.
3rd Stage	4.4 min.
TOTAL	4 hr. 24.8 min.

Third, these patients seldom complain of backache, and if they do have one, it can usually be relieved by the pelvic rocking exercise. The fourth possible benefit from the exercises is the possibility that they may reduce the number of severe toxemias. In this group of patients, we have had no convulsions prior to delivery, and only one patient with a post-partum convulsion. This is, of course, a theoretical statement because I do not have controls in my own practice who have had no exercises. However, the fact still remains that in this particular group something has prevented severe toxemias.

Of course, many of these patients have been delivered more than once in

this series. Several of them have told me that during the second or third pregnancy, they have been rather careless about doing the exercises, and as a result have had harder and longer labors. This has happened too many times to be a mere coincidence. As a result of this information from the patients, I have insisted that with the second pregnancy all classes be attended again. Also, if it has been more than two years since they had the class all should be repeated. Even if the mother has been through the classes three or four times, I feel she should attend at least one or two in subsequent pregnancies for a review. They are all human and unless they are definitely reminded in each pregnancy they might forget and thus have a more difficult labor and delivery.

In addition to the classes given by the nurses we also have a lecture night for the mothers and fathers together. This is really a combination of three lectures and probably should be given on three different evenings, but rather than try to get the patients out this much we do the combination. One lecture is given on neonatal care of the infant by my partner, a pediatrician. The other two, on prenatal care, labor and delivery, are given by the author.

Movies showing rooming in, four deliveries, identification of the baby, the different hospital rooms and equipment are shown to these groups. The movies were made by the author, but other rented or purchased movies can be used. By showing all the details of the labor and delivery room I feel we can eliminate fears which may otherwise have caused a patient to become tense, and thus have more anxiety; which would detract from an otherwise pleasurable experience.

The data which are presented in the following tables were taken *at the time of delivery in all cases.* They are not figures taken from a hospital record, which at times may not have been completed until several hours after delivery by a tired nurse who was anxious to get home. This is really an important point because many times errors in details are made in routine hospital recordings.

Table 1 shows the total number of babies and mothers cared for during the six year period from January 1, 1951, to December 31, 1956. About one-third of the patients were primiparas. In other communities, especially university areas, this percentage may vary. There were thirty-seven sets of twins, which is about the usual average. Ninety-nine percent of the patients were of the white race, and very few were from foreign lands.

Table 2 shows the average time the primiparas were in labor. This figure is about one-half the time considered the normal average by text books.[2] It is sometimes quite difficult to determine when active labor begins. The definition of beginning labor is regular contractions, so in most patients we followed this idea. However, whenever a patient proceeded into active labor from *irregular* contractions we considered her labor beginning at the time of the irregular contractions.

This is especially true in the multiparas whose average labor is shown in Table 3. Many multiparas do seem to start with irregular contractions and then after an enema begin good, regular contractions. In any instance where we were in doubt as to the time labor actually began, we have used the longer time interval. This was done to eliminate any possibility of our enthusiasm for the method to interfere with accurate sta-

tistics. The multiparas also show an average time in labor of about one-half that given in Williams' book on obstetrics. Therefore, these patients with better ability to relax do have shorter labors.

Table 4 shows the percentage who attended classes and lectures. All of these patients have attended classes at some time. The reason for the six percent being in the unattended column is because during one of her pregnancies a multipara could not or would not attend. Whether they attended or not, all of these patients had the support of my own nurse being with them, all the time during active labor. The nurses who teach are on call night and day.

A smaller percentage of the couples attended the lectures. There are three reasons for this. First, it is more difficult to get fathers interested in taking an active part in their wives pregnancy. Secondly, they were working a night shift and felt their work was more important. Third, many had attended once or twice before, but with subsequent pregnancies felt it was unnecessary; and where the pregnancies were close together, I agreed with them. I feel that it is not as important to repeat the lectures, as it is the classes.

In table 5 the different types of deliveries are presented. The high percentage of spontaneous deliveries is amazing. At no time was forceps delivery delayed where it was necessary. A few patients did have a longer second stage than I liked, but had a desire to watch their deliveries and so were allowed to deliver spontaneously. In view of the low percentage of forceps deliveries in this group of trained patients, I think it would be well for us to re-evaluate the indications for instrument

TABLE NO. 4 ATTENDANCE AT CLASSES AND LECTURES

	NO.	%
Attended	2999	94
Did not attend	177	6
Lectures for Fathers and Mothers		
	NO.	%
Attended	2394	75
Did Not Attend	782	25

TABLE NO. 5 TYPE OF DELIVERY—3214 BABIES

	NO.	% OF TOTAL
Spontaneous	3070	95.5
Low Forceps	31	0.9
Mid Forceps	2	0.1
Breech Extractions	8	0.2
Cesarean Section	95	2.9
Version & Extractions	8	0.2

TABLE NO. 6 TYPE OF DELIVERY—3214 BABIES

	MULTIPS: 2250 BABIES		PRIMIPS: 694 BABIES	
	NO.	%	NO.	%
Spontaneous	2178	96.8	892	92.5
Mid Forceps	1	.05	1	0.1
Low Forceps	1	.05	30	3.1
Cesarean Section	65	2.9	30	3.1
Breech Extraction	1	.05	7	0.7
Version & Extraction	4	.2	4	0.4

TABLE NO. 7 POSITIONS AND PRESENTATIONS

	MULTIPS		PRIMIPS	
	NO.	%	NO.	%
LOA	1471	65.4	608	63.0
ROA	613	27.2	287	29.6
ROP	49	2.2	13	1.3
LOP	25	1.1	13	1.3
Frank Breech	54	2.4	34	3.5
Footling Breech	30	1.3	3	0.3
Transverse	6	0.4	6	0.6
Face	2	0.1	0	0

delivery. In no case was the mother or baby harmed by the spontaneous delivery. I am not going on record as one who condemns forceps deliveries, but I do think that they are performed in many instances where a little prenatal training could have eliminated an operative procedure.

Table 6 shows the slight difference in spontaneous deliveries in the primiparas and the corresponding increase in percentage of operative deliveries. Forceps were used only twice in 2,250 babies delivered by multiparas. These did not include the few instances where forceps may have been used on an after coming head in a breach delivery. The various reasons for the Cesarean Sections will be given later.

Table 7 lists the various positions. There is only one noticeable difference here and that has to do with the percentages of posteriors. I believe this is a large enough series now to make the statement that the exercises seem to make for fewer posterior presentations. Perhaps this is the result of a more relaxed attitude in labor, due to the knowledge, and lack of fear which the patient may have. Whatever the reason statistically, we are seeing fewer babies born in the posterior position, and less manipulation is used to convert posteriors to the anterior position for delivery.

Many people have the misconception that patients in a Natural Childbirth program go through labor and delivery without sedation and no anesthesia.

Tables 8 and 9 should change this idea. Although some of the patients (39.1% of the multiparas and 9.9% of the primiparas) had no medication during labor, most of them did require some. The important fact to notice here is that very few of them required more than 100 mgm. of demerol during labor. This of course means the babies were not narcotized when they were delivered.

The same is true of the anesthesia given. These patients have all been told that they may have as much sedation, and as much anesthesia, as they want; providing it is not going to be harmful. Some of them want to be asleep for the delivery, but a glance at Table No. 9 will show this percentage to be small. The term 'partial anesthesia' is used where the patient lost consciousness only for a few seconds. These mothers are usually awake for the infant's first cry which usually occurs when the baby is on the mother's abdomen before the cord is severed. Only twelve of the 2,156 multiparas and twenty-eight of the 926 primiparas had complete anesthesia.

Table 10 indicates the number of episiotomies. This may seem like a procedure of minor consequence to most obstetricians, but we have learned from our patients in the classes that this minor procedure causes great anxiety. The percentage which I deliver without epesiotomy is growing less in spite of this knowledge. However, I think that if we dared tell the patient to stretch the perineal muscles with her own fingers the last part of pregnancy we could eliminate more of the episiotomies. I naturally believe that an episiotomy is better than a tear, and the only reason for these lacerations is that it was thought delivery could be accomplished leaving the perineum intact.

The indications for the Cesarean Sections are listed in Table 11. Almost one-half were done because of previous sections. In private practice, I have never tried to deliver a patient from below who has had a previous section. The percentage of sections in the entire

group is 2.9%. A few of the repeat sections listed here, have had four Cesareans. I believe there is no reason to tell a mother she can have only a certain number of babies by section. Some uteri are still in good condition after four such procedures.

In any method of care we are interested especially in the final outcome of the baby and mother. Table No. 12, shows the small percentage of Neonatal deaths. All of these deaths were shown by autopsy to be unpreventable and most of them were due to gross congenital anomalies. Only one was due to erythroblastosis. However, some of the stillbirths were due to this disease. The one intrapartal death could not be explained by the labor or by the autopsy.

One very important fact is that only one child has become spastic as far as I can determine after a careful check with all the pediatricians in this community. Ninety percent of these babies are cared for by my partner so we have an accurate check on most of them. The one spastic was a post-mature baby that weighed less than five pounds. The mother had been abused both physically and mentally during her pregnancy by her husband. I suspect the cause of the spasticity is the post-maturity.

When the Natural Childbirth Method was first begun in America there was a great deal of controversy. In this community, I was the only one conducting classes for two years. However, in 1952 the other obstetricians began having a nurse teach large classes. These patients have not been taught exercises, but do have an opportunity to learn about their pregnancies, labors, and deliveries.

Table 13 shows the effect these classes have had over a period of years. The percentage of operative deliveries

TABLE NO. 8 MEDICATIONS IN 3082 MOTHERS DELIVERED FROM BELOW

	MULTIPARAS: 2156		PRIMIPARAS: 926	
	NO.	%	NO.	%
None	842	39.1	92	9.9
Only 50 mgm. Demerol	1131	52.4	522	56.1
from 50-150 Mgsm.	160	7.4	230	24.8
from 150 Mgm. or more	20	0.9	82	8.9
Morphine grs. 1/6	3	0.1		

TABLE NO. 9 ANESTHESIA IN 3082 MOTHERS DELIVERED FROM BELOW

	MULTIPARAS: 2156		PRIMIPARAS: 926	
	NO.	%	NO.	%
None	155	7.2	84	9.0
Whiffs	1960	91.0	801	86.5
Partial	29	1.3	13	1.4
Complete	12	0.5	28	3.1

TABLE NO. 10 EPISIOTOMIES

	MULTIPS		PRIMIPS	
	NO.	%	NO.	%
None	779	36.1	52	5.6
Episiotomy	1158	53.7	851	92.0
1% Laceration	203	9.4	16	1.7
2% Laceration	16	0.8	7	0.7

TABLE NO. 11 INDICATIONS FOR SECTIONS: 95

	65 MULTIPARAS	30 PRIMIPARAS
Repeat	44	0
Disproportion	0	14
Placenta Previa	11	4
Placenta Abruptio	4	0
Prolonged Labor	0	3
Toxemia	3	4
Diabetes	0	1
Others	3	4

has steadily declined. These statistics were taken from the court house records.

My own deliveries in this table are represented by the letter D. The slight variation in number of deliveries is due to the fact, that the court house record includes those babies which I delivered for other doctors, who did not take part in my educational program.

The letters A, B, and C represent three other obstetricians practicing in this city. One could ask, 'Do the exercises cause my patients to have a smaller percentage of operative deliveries?'.

Summary and Conclusions

1. Education for childbirth has resulted in a marked reduction in the total number of hours in labor. The length of second stage of labor was also reduced. Some obstetricians have objected to this method because it is time consuming. Actually, once the program is organized, the doctor has much more free time, because of the shorter number of hours the patient is in labor. With this method, I believe it is wise for the obstetrician to remain in the hospital at all times, while his patients are in active labor. This is especially true of the multiparas. I never leave the hospital when a multipara is in active labor, or when a primipara has reached four to five centimeters dilatation. These patients are usually so relaxed that labor may progress very rapidly. It is necessary to have a nurse right in the room with them, otherwise I am afraid many mothers would deliver in bed.

2. The morbidity rate is lessened in the mothers. Not more than six of these mothers have remained in the hospital for more than the required

TABLE NO. 12 STILLBIRTHS AND NEONATAL DEATHS

	NO.
Intrapartal Death	1
Stillbirths	22
Neonatal Deaths	24
Spastics	1
Temporary Brachial plexus injury	2
Injured Babies	0

TABLE NO. 13 DECREASE IN OPERATIVE DELIVERIES IN THE COMMUNITY

OBSTETRICIAN	TOTAL NO. DELIVERIES	OPERATIVE DELIVERIES NO.	%
1951			
A	434	148	33.0
B	270	120	44.0
C	178	82	45.0
D	560	31	5.5
1952			
A	469	101	20.0
B	213	74	35.0
C	186	60	32.0
D	561	21	3.7
1953			
A	460	57	12.4
B	282	68	24.0
C	220	59	27.0
D	555	19	3.4
1954			
A	470	52	11.0
B	256	60	23.0
C	287	70	24.0
D	518	25	4.7
1955			
A	513	56	11.0
B	304	62	20.0
C	299	72	24.0
D	510	27	5.3
1956			
A	502	47	9.3
B	281	41	14.0
C	322	75	23.0
D	525	19	3.6

The letter D represents cases from my own practice.

six or seven days. For the most part, they were very well physically, and happy about the 'easy times' they had. The mothers also seemed to feel better during pregnancy and their posture was greatly improved. Rarely do we have to prescribe a maternity garment for backache.

3. The babies were very alert when born. Rarely was resuscitation used. Excessive mucous was seldom present. Ninety-five percent of the babies did not even need a spanking to start them breathing.

4. Deliveries were much less complicated. This decreased the morbidity and definitely added to the safety of the mother. There were no preventable maternal deaths.

5. The average loss of blood was much less. This was partly due to less anesthesia and less instrumentation, but probably also to the fact that I. V. ergotrate was given with the delivery. Uterine inertia did occur but not one uterus was lost due to post partum complication. One mother did undergo hysterectomy several weeks after delivery, because of bleeding from fibroids. Very few patients required transfusions.

6. No real attempt was made to evaluate the discomfort or pain these mothers had because I feel there is no accurate method for doing this. However, it could not have been too great as evidenced by the fact that most of these patients returned to me in subsequent pregnancies. Most of them enjoyed their pregnancies, labors and deliveries, and many of them watched their babies being delivered. I have even had two mothers watch their own breech deliveries. A mirror was arranged at the foot of the table in each delivery room for this purpose. Before the delivery the patients were asked if they desired to watch the birth.

7. Support during labor must be given by a properly trained nurse. Even very well trained patients may lose their control without proper support, or if someone unwittingly gives them too much sedation. I learned very early that 50 mgms. of demerol produced relaxation in a patient who might be apprehensive, but more than that made her confused, so that she was unable to cooperate.

8. Recently I have used hypnosis on some of these trained patients, (not in this series), and find they are very easy to hypnotize; probably because they have learned so much about relaxation.

9. There are still a few who criticize this method, but perhaps there are obstetricians who have never given the method a fair trial, or those who expect 100% good results. I have also often stated[3] that perhaps it deflates an obstetrician's ego, to see a patient do successfully what he has spent years of training to accomplish, with all sorts of drugs and specialized instruments.

Those of us who have used the method extensively could answer any of the criticism because its merits speak for themselves. The infant and maternal mortality rate in this country has been greatly reduced, but any method which further reduces the hazards makes just a little more difference in that mortality rate. Just as important, is the fact, that it is becoming more and more important to have a patient satisfied emotionally

as well as physically. This emotional satisfaction can be attained through such a system as has been described.

It is a physical effort to have a baby, so let's train the mothers for this effort, and at the same time give her an emotionally satisfying experience.

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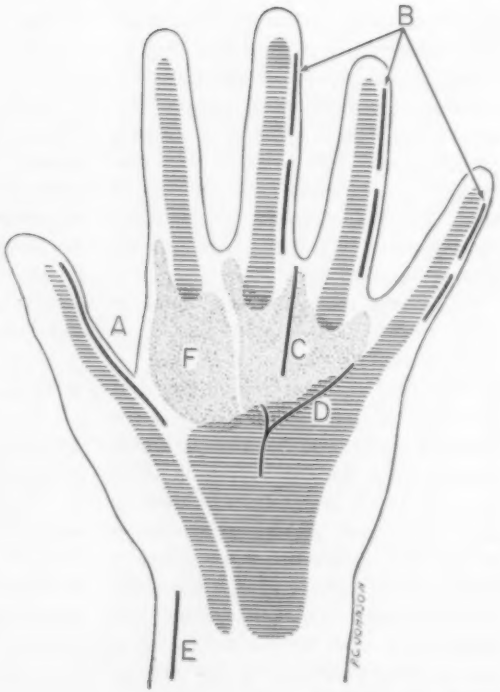
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Clini-Clipping

INCISIONS FOR APPROACH TO DIGITAL, PALMAR AND CARPAL SYNOVIA

A. Radiac Bursa Incision
B. Digital Synovia Incisions
C. Middle Palmar Space Incision
D. Ulnar Bura Incision
E. Carpal Synovia Incision
F. Thenar Space





SYPHILIS

General Practitioner and Venereologist Discuss the Day to Day Problems in Venereal Disease

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The Practitioner I should like to ask you some of the questions which confront me in patient management in my practice. The opinion I get from articles in my medical journals is that there has been a considerable decrease in the incidence of infections due to syphilis. Would you think this incidence low enough now so I may discontinue making blood tests routinely on my patients?

Syphilologist Well, here are my thoughts on the matter: As a result of a vigorous V. D. control effort all over our country, there has been a very material decrease in the number of new syphilis cases being discovered and reported. However, from July, 1955, through June of 1956, 6,757 early infectious cases were reported to the United States Public Health Service. That, to me, was a sizeable number. Now I'm also concerned that we think about the other infected individuals, who were not discovered and reported in the same period. These are individuals who did not get treated and will be particularly subject, of course, to having their disease advance to a crippling disability such as insanity, heart disease, blindness or other severe physical impairment. And furthermore, what you and I should continue to concern ourselves about are those infections that have occurred over the past several decades, and which have not been discovered and treated. There are many of these in any community. I like to think of syphilis as two diseases: first, an acute infectious disease and

second, a chronic disease. What you are going to be concerned generally about as a practitioner is the chronic stage of the disease. And, this chronic disease will be evident in your patients for the most part, as a positive blood test, more properly called a serologic test for syphilis, abbreviated (STS).

Practitioner It would seem to me that with all the blood testing which has been done, most of those infected would have been discovered and treated by now.

Syphilologist Of course, the ratio of the population who have presumptive evidence of syphilis in the form of a reactive test, will vary from state to state, and in states, from community to community.

However, among those with a reactive test whatever the area, it seems to be fairly uniform that a third or a fourth of the individuals with a reactive test are in need of treatment for syphilis. That is our experience here in the District of Columbia. We find here that the ratio of those tested having a positive test rises cumulatively with increase in age, and this cumulative ratio in the Caucasians tested is approximately 5 per cent, and in the Negroid approximately 25 per cent. Of those considered to have syphilis, only about two thirds are regarded as having had adequate treatment. Other communities report about the same, for example: Dr. Adele C. Shephard in the Editorials and Comments Section of the J.A.M.A.[1] makes these remarks on the results of clinical evaluation on tests done in New Jersey:

> "In New Jersey in 45,000 tests performed in one year, 310 persons with positive results were found, and, of those, 104 needed some form of treatment or retreatment."

Physicians in venereal disease control programs, I am certain, will be unanimous in their recommendation to all practitioners to continue serologic testing for some time to come.

Practitioner I notice you used the term "reactive" when referring to the serologic test. Is this a new test or a different way of reporting the results of the test?

Syphilologist Serologists rather generally are changing to the use of this term rather than "positive", "doubtful" or "negative". The serologic test, of course, is a non-specific test. Serologic changes stimulated by other acute and chronic infections than syphilis will produce reactions to the non-specific test antigen used. Also, a proportion of degenerative conditions such as the collagen diseases, also produce reactive results. Since the test then is not diagnostically specific, serologists have adopted the terms "reactive", sometimes abbreviated "R", weakly reactive "WR", and non-reactive "NR", as being more appropriate for use than the terms "positive" and "doubtful".

Practitioner This type of thing occasionally bothers me. When I send a second test for diagnostic confirmation after an initial test has been reported reactive, the second test may come back reported as non-reactive. This also happens occasionally in the instance of serologic reports returned on patients who I have treated for syphilis. How would you interpret these conflicting results?

Syphilologist Here is what may happen: A serologic test for syphilis, either a complement fixation or floccula-

tion test, measures only the amount of reagin in the serum on the day it is being tested. This amount may vary from day to day as a result of the patients reactions to the infection and is one reason for conflicting reports. Another reason for conflicting reports is that the various antigens or technics used within different laboratories may result in a varying testing sensitivity, with the result that one laboratory will consistently be determining a lesser or greater amount of reagin in its serologic testing than will another laboratory. So, if a blood sample is sent to two laboratories conflicting reports may result for this reason. Also factors such as the temperature at which the test is run and humidity influence the reading of the test. Thus if there is only a small amount of reagin in the serum tested the result will be a reactive reading at one time and a non-reactive reading at another time on the same serum. The various state health department laboratories make every effort to maintain their serologic tests at a standardized level of reactivity. If you wish to determine the level of reactivity of the serologic tests in the laboratory you are using you may refer a duplicate sample to your state laboratory as a control.

Practitioner In practically all of the patients I see, there is nothing in the history to suggest primary or secondary syphilitic lesions which might aid me in my evaluation of the patient. I find, also, these patients, consistently do not admit to any premarital or extramarital exposure. Can I say, then, that patients having first a weekly reactive and then a subsequent negative report are non-syphilitic? How should I proceed in my management of this type of patient?

Syphilologist The answer to your first question is no, but this, as does your second, requires some elaboration. I quote from an article[3] written for our local Medical Society, "I don't think I could advise that. Syphilis is an all-or-nothing proposition. An individual is either infected with syphilis or is not infected with syphilis. The serologic test for syphilis is a very valuable, but not a perfect tool, for establishing a diagnosis of syphilitic infection. Remember, this test is a non-specific test, and, while in general it reacts in a manner comparable to an antibody, in other of its characteristics it is not entirely similar to an antibody. The reactive substance in the blood serum is termed reagin. It appears to be universally present in every individual. In some few persons this reagin is always high enough for a serologic test for syphilis to be positive, even though no stimulating or infectious cause can be determined. In others this reagin formation is stimulated to reach a reactive level by numerous viruses, bacteria, and, of course, specifically by the Treponema of syphilis, yaws and pinta and by nonbacterial diseases, such as the collagen diseases. The acute diseases, such as viral pneumonia, mononucleosis, and the like, usually produce only small or moderate rises in reagin, and these are temporary. These types of reactive states usually persist for only a few days or a few week. However, some of the more chronic bacterial or protozoal infections, such as leprosy and malaria, or the collagen diseases, produce a more persistent type of reaction. These humoral rises in reagin not caused by a Treponemal disease are known as "biologic false positive reactions." As a rule, while a number of patients infected with the Treponemal diseases revert to serone-

gativity spontaneously, many show persistent sero-positivity throughout their lifetime, unless treated early in their disease. Those treated after the infection has been present for 3 or 4 years seldom obtain seronegativity even though cured of their infection. Unfortunately, an occasional patient with a serious syphilitic infection such as cardiovascular or central nevous system disease, does not have a positive serologic reaction for syphilis. That the strength or titer of a serologic reaction is not an indication of the severity of the infection but rather an indication of the body's response to infection must be stressed. A patient may have a severe crippling disease with a very low serologic titer or as said above, have a negative serologic reaction. Tests of low titer cannot be discounted in the evaluation of a patient.

Practitioner Having reached this point, it seems then that I must establish whether my patient has a biologic false reaction or has syphilis.

Syphilologist In view of weakly reactive and conflicting laboratory reports, one is often tempted, I am sure, to flip a coin to decide the matter. It is my feeling that one should proceed to resolve the patient's problem in one of the following ways: (1) Apply treatment immediately with the idea of insuring the patient against any progression and crippling by syphilis, (2) utilize a more specific test, or (3) observe the serologic reaction for a few months.

The insurance type of treatment. Treatment utilizing 6 million units of a respository type of procaine penicillin over a 2-week period, or 1 injection of 2.4 million units of benzathine penicillin (Bicillin) at a single injection, has been shown to be highly satisfactory. The patient is spared the expense of further investigation in order to establish a specific diagnosis and, more pertinent, he and his family are spared the possible psychic trauma of having a diagnosis of syphilis established. In the event that serologic testing of marital partners and children can be accomplished, this course, as you realize, has great merit to recommend it in patient handling. This type of insurance treatment should always be applied to an individual unless it is assured he will follow through to a definitive diagnosis if that course is decided upon.

The specific test. The only test currently available which is more specific than the serologic test for syphilis is the *Treponema pallidum immobilization test* (TPI). This test is based on the immobilization of living spirochetes by what is apparently a true syphilitic antibody within the serum." Your health department will be able to tell you of the availability of this test in your community, or where you can get it done. The usual charge by a private laboratory is $25.00 to $30.00 per test.

Observation. The acute infectious diseases usually produce a rise in reagin to a reactive level for only a few days or a few weeks. If the patient is reliable and can be continued under observation for a matter of 3 or 4 months, a serologic test can be taken at monthly intervals. If the test reverts and remains seronegative, a diagnosis of biologic false reaction can be made and the patient will not require antisyphilitic treatment. If, however, the serologic test remains reactive for more than 4 months, it is surely the wisest course to give penicillin treatment unless a Treponema immobilization test has been done and is negative.

Practitioner As yet, you haven't said anything about whether I should do a spinal tap and the serologic reactions of the spinal fluid tested in these doubtful cases. In other words, when is a spinal fluid test for syphilis indicated?

Syphilologist In case you choose to select the TPI test method of patient handling and the TPI is negative, a spinal fluid test need not be done.

If the observation course is selected, a spinal fluid test may be diagnostic. If positive, of course, the case is resolved. Therefore, in the instance that observation is selected, a spinal tap should be done as early in the diagnostic study as is possible.

If insurance treatment is given, a spinal fluid examination need not be done initially. The results of treatment with penicillin, even when cerebrospinal involvement has taken place, are so good as to make pre-treatment spinal fluid examination generally unwarranted. The exception would be, of course, those patients with abnormal neurologic signs or symptoms suggestive of syphilitic brain or spinal cord involvement. Following treatment, if the serologic tests done during a reasonable period of follow-up (6 months to 1 year) are negative, the spinal fluid test may be omitted. However, if the serologic test remains positive for 1 year, the spinal fluid should be examined.

Practitioner Suppose I have an uncertain case with a low-titered reaction, and I follow the insurance plan and treat with penicillin? What should I expect as I follow this patient? When should repeat serologic testing be done, and what will it show if (1) he actually has syphilis and (2) if he does not have syphilis?

Syphilologist When chronic reagin-stimulating disease can be ruled out, a diagnosis of syphilis is supported in those patients who have reactive STS for 3 to 4 months. If the tests are nonreactive, they are of no diagnostic import. This finding may mean (1) that if syphilis were present, seronegativity has been attained following treatment or (2) that syphilis was not present and the stimulant to reagin formation is no longer active in the patient. A year's observation with a STS at a 6-month interval is adequate for these patients. If the STS remains positive after a year's observation, a spinal tap and spinal fluid test should be done as a part of the follow-up study. If the STS is found negative on both tests, a spinal fluid examination need not be done.

Practitioner A further question: What about reinfection syphilis? Does it have any distinguishing serologic reaction? For example, I have a patient who has a history of having had syphilis and has had treatment. He now comes in and I find a positive serological test for syphilis. How may I tell whether this is (1) a fixed positive reaction, (2) syphilis that has been insufficiently treated, or (3) a reinfection?

Syphilologist This is a difficult question to answer briefly. Usually, a reinfection causes a rise in serologic titer. If a history of a chancre or a rash is obtained and there is a rise in titer over previously observed tests, a diagnosis of reinfection should be considered. In the event no history or physical evidence of primary or secondary lesions is elicited but a rise in titer occurs, it cannot be definitely established whether this represents treatment failure or reinfection. Asymptomatic reinfection, we know, does occur. That there were only 6,757 secondary syphilis cases reported

in the United States last year (1956) shows that the chance of infectious exposure is not great, especially if all the patient's sexual partners have been examined and treated, definitively or prophylactically. In any event, retreatment is indicated for any patient who shows a sustained rise in serologic titer in tests taken over a period of 3 to 4 months, whether due to reinfection or treatment failure. Remember, transient rises in titer may be induced by acute infections, calling for a period of observation.

It should be well known by now that, when syphilis has been present for a number of years, a fixed positive reaction —serofastness is another term—is present in most patients. The fortuitous outcome of seronegativity is attained in only about 15 per cent of patients who have been infected with syphilis for 4 or more years.

We have adopted a rule-of-thumb approach in reference to whether additional treatment is indicated in the serofast or fixed positive reactive patients. If, 1 year after the initial treatment, the serologic titer remains at the same level as it was initially, retreatment, for 1 time only, with 9 million units of penicillin is given. If the titer has fallen to any level below that which it was initially, retreatment is not indicated. Of course, a careful physical and neurologic examination should be done and it should be known that the spinal fluid findings are negative in these serofast cases. In most instances there is no indication for giving more than these 2 courses of treatment.

Practitioner Are we masking syphilis by the current use of antibiotics, more especially penicillin? In other words, is it possible that we are developing a crop of undertreated syphilitics who are temporarily serologically negative but who actually have the infection? Also, do the 'mycin' drugs have any therapeutic effect in syphilis?

Syphilologist The answer to your first question is "No." During the incubation period, it takes only a very little antibiotic to cure syphilis. Also, with the level of control we have reached, the probabilities of infection are not very great. If the amount of antibiotic given has not been sufficient for cure, the serologic test rapidly becomes and remains positive.

Notice that I said antibiotic instead of penicillin, because the broad spectrum antibiotics, including tetracycline, chlorotetracycline, and choloromycetin, have been shown to be effective agents for the treatment of syphilis. Other broad-spectrum antibiotics are undoubtedly effective but have not as yet been evaluated. For the patient allergic to penicillin, the 3 antibiotics above mentioned, in dosages of 60 mg. per Kg. per day for 8 days, will give as good results as penicillin in the treatment of syphilis.

Practitioner Would you consider a pregnant woman with a reactive serologic test for syphilis in the same light as the sero-reacting individuals we have discussed?

Syphilologist I am glad you brought up pregnancy at this point. The paramount consideration in a pregnant woman should be to insure insofar as possible she gives birth to a healthy infant. If the mother is infected with syphilis the earlier treatment is started the more certain one is of delivering a non-syphilitic infant. Therefore, a positive serologic test for syphilis discovered during pregnancy should always be thought of as a medical emergency.

"The insurance type of treatment" as outlined should be instituted at once. Then, if it is important sociologically to establish the presence or absence of syphilis, the Treponema immobilization test may be done. The infant's and mother's blood should be tested immediately after birth. If the infant's test is non-reactive one can be quite certain that the infant has escaped infection or has been cured in utero. If one wishes to take every possible measure for the protection of this infant there can be no objection to a repeat test at 6 months of age. In infants whose test is positive at birth, one may be dealing wtih reagin transferred from the mother's bloodstream, or with reagin elaborated as a response to an actual syphilitic infection. In the first instance, the serologic test will revert to non-reactive state within 4 months. In the second instance, if treatment has been given the mother at any time during pregnancy, the infant will in most cases have been cured. In the cured infant, the titer of the monthly serologic tests will decline and will reach a non-reactive or very low titer within 6 months. In the infant who is not cured by the mother's prenatal treatment, monthly tests will show a titer which does not fall, or falls but slightly, and then begins to rise to a higher level than was present at birth. These infants will usually develop clinical signs of syphilitic infection if observed long enough. However, one should not wait for clinical signs but as soon as this type of a serologic behavior becomes evident, institute treatment. Benzathine penicillin (bicillin) is the antibiotic of choice since an adequate dosage with the least trauma can be attained with 2 injections of 600,000 units each given 1 week apart. The treated infant should be followed post-treatment in the same manner as an adult.

Practitioner Should the woman who remains persistently sero-reactive be treated each time she is pregnant?

Syphilologist A rule of thumb can be followed here. If at any time she has had 3 million or more units of penicillin and her serologic titer is reactive in a dilution of 1:4 or less she need not be retreated. If her serologic titer is reactive in a higher dilution than 1:4 I advise retreatment as early in pregnancy as possible. This is done because of the difficulty of determining reinfection or superinfection at this level of reagin reactivity.

The broad spectum antibiotics in the dosages outlined above are as effective for treatment during pregnancy as is penicillin.

Practitioner A summary might be useful at this point of closing our discussion. First, although we practitioners should concern ourselves with the recognition and prompt treatment of early syphilis, more commonly, especially in regard to total numbers, we must expect to find ourselves concerned with the diagnosis and treatment of the chronic stages of the disease. Secondly, if the history and physical examination do not suggest syphilis and the patient demands a definitive diagnosis a Treponemal immobilization test for syphilis should be done. Thirdly, if one is confident that a suitable period of observation can be instituted to permit the determination that a temporary state of biologic false positivity exist, then the patient may be followed for a period in order to resolve the diagnosis. Lastly, when one feels that the patient is not apt to follow through or is not able to afford the previously mentioned methods of man-

agement then he/she should be treated with penicillin or a broad spectrum antibiotic.

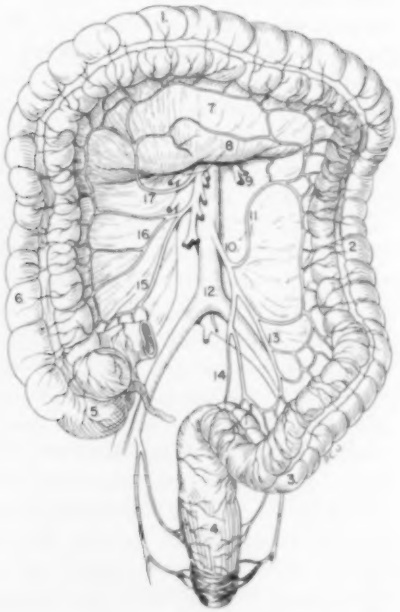
Syphilologist Yes, that summarizes our discussion very well. I would like to add one more comment on treatment. The public health people concerned with this problem think we should attempt to attain as nearly a 100 per cent cure as possible, therefore, there might be some advantage in giving a somewhat larger dosage than that recommended, of 6 million units of procaine or of 2.4 million units of benzathine penicillin. I do not think increasing the dosage to more than two or three times this amount, however, would be justified. I hope I might have been helpful to you in this discussion of some of the common problems in the management of the patient whose serum is reactive to a test for syphilis.

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Dept. of Public Health

Clini-Clipping



1. Transverse colon
2. Descending colon
3. Sigmoid colon
4. Rectum
5. Cecum
6. Ascending colon
7. Transverse mesocolon
8. Superior Mesenteric artery
9. Inferior mesenteric vein
10. Inferior mesenteric artery
11. Left colic artery
12. Abdominal aorta
13. Sigmoid artery
14. Superior hemorrhoidal artery
15. Ileo colic artery
16. Right colic artery
17. Mid-colic artery

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Acute Enteritis Among Hospitalized Patients

Acute enteritis is occurring with increasing frequency among hospitalized patients. As a post-operative complication, acute enteritis has been recognized for many years, the first reported case having occurred at the Johns Hopkins Hospital, as described by Finney[12] in 1893. The recent increase in occurrence of acute enteritis appears to be related to the use of antibiotics and to the increasing prevalence of staphylococci, resistant to antibiotics.

In this paper, only those instances of acute enteritis will be considered which have occurred in primary relation to antibiotics, staphylococci, and surgical therapy. Many of the discussions in the recent literature have been concerned with the basic etiology of these cases of enteritis, a topic about which there is a considerable lack of knowledge and agreement.

Post-operative enteritis was considered as a distinct entity until it was pointed out that similar cases occurred in non-surgical patients. While a search was being made for etiologic factors common to post-operative and non-surgical enteritis, antibiotics were being used in increasing amounts, and it was noted that the number of instances of acute enteritis was also increasing. Concurrent with the increasing use of antibiotics, there was an increasing occurrence of cases of acute enteritis in which staphylococci were found.

The problem of finding a basic etiology for all patients ill of acute enteritis associated with antibiotics, staphylococci, and surgery is complicated by the occurrence of clinically similar conditions in each of the 8 classes of patients, representing the possible combinations of the 3 factors considered to be of primary importance: antibiotics, staphylococci, and surgery. (See table on following page).

Patients representing these different classes will be discussed in the body of this paper.

Thus, it is evident that all instances of acute enteritis similar to those asso-

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CLASS	ANTIBIOTICS USE	STAPHYLOCOCCI PRESENT	POST-OPERATIVE
1	Yes	Yes	Yes
2	Yes	Yes	No
3	Yes	No	Yes
4	Yes	No	No
5	No	Yes	Yes
6	No	Yes	No
7	No	No	Yes
8	No	No	No

ciated with surgery, with the use of antibiotics, or with the presence of staphylococci, do not have in common either surgery, antibiotics or staphylococci. If these cases do have some etiologic factors in common, these factors have not as yet been determined. The grouping together of cases of acute enteritis associated with surgery, antibiotics or staphylococci is due more to historical coincidence than to basic relationships, and this will be the case until more basic understanding of the etiologies of the various conditions is achieved.

In this report, the many factors of possible significance in the etiology of acute enteritis will be presented under the rather arbitrary headings of antibiotics, staphylococci, and surgery. Because there are inter-relationships among these factors, the heading under which any particular one will be discussed is in part also arbitrary.

Before discussing etiology, the pathologic findings in acute enteritis will be presented, with some remarks about attempts which have been made to find a common pathologic basis for all of the cases associated with surgery, antibiotics or staphylococci. At the end of the paper there will be a short discussion of the clinical features of acute enteritis.

Pathology Bockus[1] describes three types of pathologic findings in acute enteritis: Catarrhal, membranous, and phlegmonous. Catarrhal enteritis presents a mucosa which may show numerous red flecks, particularly at the tips of the vavulate conniventes. The mucous membrane may be edematous and glazed or may be covered with a slimy exudate of mucous, or pus, or both. There may be desquamation of the surface epithelium. With more severe inflammations, the glandular layer may become infiltrated with round and polymorphonuclear cells. The solitary follicles may stand out, giving a "follicular" picture.

Membranous enteritis is synonymous with diphtheritic, croupous, fibrinous, or pseudomembranous enteritis. The adherent membrane is composed of necrotic mucosa, fibrin, mucous and blood cells. The submucosa is usually thickened and edematous and often hemorrhagic. Bacteria are found in the sloughs as well as in the adjacent intestinal wall. This is the type of enteritis encountered in uremia, diphtheria, pyemia, and in arsenic, or mercury poisoning. Membranous enteritis can infrequently be diagnosed during life at surgery, by proctosigmoidoscopy, or by identifying membranous casts of portions of the intestinal tract in the stool.

Phlegmonous enteritis has not been encountered in association with surgery, antibiotics or staphylococci, and will not be described.

Most of the instances of acute enteritis associated with surgery, antibiotics or staphylococci, for which pathologic findings are available, are of the membranous type. Cases have also been reported with catarrhal changes with mixed catarrhal and membranous changes of varying severity, and even with no intestinal lesions. Pathologic diagnoses should not be made on clin-

ical grounds alone, and particularly with acute enteritis where similar clinical pictures have been described with different pathologic findings it is dangerous to make pathologic diagnoses without pathologic findings. The diagnosis of pseudomembranous enteritis is a pathologic diagnosis, occasionally made without justification.

There is a further difficulty than the one just mentioned, in attempting to correlate all cases of acute enteritis associated with surgery, antibiotics or staphylococci on a pathologic basis. This difficulty is that the pathologic changes associated with different etiologies are generally not specific, and do not vary sufficiently from one etiology to another to make a pathologic grouping valuable. This point is mentioned because there have been discussions in the literature which use as a basis, an entity called pseudomembranous enteritis, without fully explaining that such an entity is such a large and heterogenous one, as to be of little value in helping to understand the factors involved in its pathogenesis.

Antibiotics Antibiotics have been incriminated in the increasing occurrence of acute enteritis. The ways in which antibiotics can cause enteritis, directly or indirectly, will be discussed under the following groupings: toxic or irritative reactions; emergence of drug-resistant bacteria; alteration of intestinal flora; and superinfection.

Toxic or Irritative Reactions: Antibiotics can initiate effects in the mucosa of the lower intestinal tract, producing symptoms ranging from perianal pruritus to fulminating dysentery. Turell and Maynard[21] reported 136 patients who had an anorectocolonic syndrome associated with antibiotic therapy: 37 patients had diarrhea alone; 22 had diarrhea with anal or anogenital pruritus; 51 had pruritus alone; and 26 had burning. Of the 59 patients with diarrhea, 3 had moderate dysentery with 7-10 liquid stools per day with blood or pus. The dysentery developed within 3 to 8 days of therapy with tetracyclines. Endoscopy in these 3 cases revealed a uniformly reddened, injected, and edematous mucosa with tiny, scattered, superficial ulcerations. Gram stains of mucosal smears revealed micrococci. Among the other 56 patients with diarrhea, endoscopy revealed a mild injection of the mucosa of the rectal ampulla in 19; mild cryptitis and papillitis in 7; and excoriation of the perianal skin with normal mucosa in 21.

Jackson et al,[15] in discussing the emergence of resistant strains of staphylococci in patients being treated with terramycin for pneumonia, state that terramycin can induce diarrhea primarily, and that there can then be a secondary infection of the gut with staphylococci.

Reiner et al[26] discuss the ways by which antibiotics can irritate the intestinal mucosa. According to them antibiotics given orally can irritate the mucosa directly in their unaltered state, or indirectly after they have been converted to other chemicals within the gut. Antibiotics or their conversion products after being absorbed from the intestinal tract, and also antibiotics given parenterally, can be excreted into the bile either in original form or as metabolites. These excreted products directly or after they have been changed further in the gut, can irritate the intestinal mucosa. The authors mention that women absorb larger portions of orally administered aureomycin than

men, and therefore, larger amounts of excretory metabolites should be expected in the bile and thus in the intestinal tract of women. Four of their five cases of pseudomembranous colitis following aureomycin (4 cases) and chloramphenicol (1 case) were women, suggesting that if an irritative action had caused the colitis, it was due to a metabolite of the antibiotics. The one male who developed colitis received aureomycin intravenously, a route which produces comparatively higher blood levels than the oral route and consequently higher bile levels. Other authors have reported a male preponderance of acute enterocolitis after antibiotics, and others have found no sex difference.

The use of antibiotics has been associated with the emergence of micro-organisms resistant to the antibiotics. Antibiotic-resistant staphylococci are of most significance in the production of acute enteritis. Finland[10, 11] has summarized the studies dealing with antibiotic-resistant staphylococci. The incidence of strains of staphylococci resistant to individual antibiotics is related to the extent to which each antibiotic is used. Nearly three fourths of all strains of hospital staphylococci are highly resistant to penicillin. Strains of tetracycline-resistant staphylococci are usually about half as frequent as penicillin-resistant strains but, during the extensive use of tetracyclines in a hospital, the frequency of resistant strains may approach that of penicillin-resistant strains. Erythromycin-resistant strains of staphylococci appear and increase rapidly in hospitals where that antibiotic is used. Decrease in the extent of use of any antibiotic is usually followed by a decreased frequency of staphylococci resistant to that antibiotic.

Antibiotic-resistant staphylococci are carried by hospital personnel and patients, and new patients acquire the organisms from the old patients and from the staff. The resistant organisms can be found in the noses and throats and also in the feces of patients who are not receiving antibiotics as well as in those who are. The incidence of resistant staphylococci is greatest among hospital patients, less among outpatients, and least among the general population and in areas where antibiotics are not used.

Antibiotics alter the usual flora of the intestinal tract, by a suppressing of the organisms which are sensitive to the particular antibiotic in use, and an increasing population of organisms resistant to the antibiotics. This altered ecology often does, but need not, favor the staphylococcus. Weinstein[34] mentions that pseudomenbranous colitis is often associated with an overgrowth of proteus and pseudomonas, after pre-operative bowel preparation with various antibiotics. A leading article in Lancet[20] also states that more than one species of microbial organism may give rise to the syndrome of pseudomembranous enterocolitis. Finger and Wood[9] reported a case of apparent activation of salmonella enteritis by oxytetracycline.

Fairlie and Kendall[8] believe that the simple suppression of intestinal flora does not seem sufficient explanation for the occurrence of staphylococcal enteritis during antibiotic therapy. They mention that there may be a direct stimulation of toxin production by staphylococci under the influence of antibiotics. The onset of diarrhea and fever as early as 24 hours after starting antibiotics strongly suggests a stimulating action,

rather than suppression of the normal flora. Penicillin and streptomycin given parenterally failed to produce staphylococci in early stool cultures. Chronic upper respiratory infections, achlorhydria and cessation of food intake are other factors that might influence the changes in intestinal flora.

Changes in intestinal flora can effect changes in vitamin metabolism, which is of concern, since vitamin deficiencies may favor the development of enterocolitis, perhaps by local tissue alterations and perhaps by decreased body resistance. von Oettinger[32] reviews the effects of antibiotics on intestinal bacterial flora with respect to the changes in vitamin production within the gut. The author cites the work of DiRaimondo et al, who found that in normal people and in patients, there is a marked reduction of urinary excretion of B-complex vitamins after therapeutic levels of terramycin, chloromycetin or aureomycin have been reached. Clinical avitaminoses may occur in undernourished people. These effects are paralleled by the disappearance from the gut of intestinal bacteria, especially of the coliform type.

Hofer and McKaskey[14] also discuss the effects of antibiotics on vitamin metabolism. They feel that the clinical vitamin deficiencies may be the result of decreased intake of food and vitamins caused by the febrile disease being treated, the result of direct actions of the broad-spectrum antibiotics on the digestive tract, or possibly the vitamin deficiencies may be produced by way of alterations in the established bowel flora. These authors also note that most of the bowel flora synthesize B-complex vitamins.

Superinfection, as pointed out by Weinstein,[34] is generally considered to mean the appearance of evidence, bacteriologic and clinical, of a new infection at a time when the initial disease is responding clinically and bacteriologically to chemotherapy. Many of the reported cases of acute enteritis have occurred as superinfections. A superinfection may convert a benign, self-limited disease into a serious, prolonged, or even fatal one.

Hofer and McKaskey[14] discuss several mechanisms through which an antibiotic-resistant micro-organism can become established and produce superinfection. An established flora resists invaders: some invaders are unable to compete in the local environment; and others are resisted by metabolites or antibiotic substances derived from established flora. These authors suggest a possible mechanism for the stimulation of resistant micro-organism by antibiotics. The mechanism, which has not been demonstrated in vivo, is that small doses of antibiotics are stimulants, analagous to the Arndt-Schultz law of poisons in small quantities being stimulants.

Cramer and Rossi[2] reported 5 cases of vomiting and diarrhea developing 5 to 10 days after the start of terramycin and chloromycetin therapy in children. These signs developed when the disorders being treated were greatly improved or practically cured. These included paratyphoid, atypical pneumonia, and meningococcal meningitis. The vomiting and diarrhea led to fatal circulatory collapse. In 2 cases a pseudomembranous enteritis due to staphylococci could be demonstrated.

Hay and McKensie[13] reported a 6-year-old girl treated with oxytetracycline for being an asymptomatic carrier of

salmonella typhimurium. On the fourth day the patient developed diarrhea, went into shock and died within 24 hours. Staphylococcus was grown from the throat and feces during life, and from the gastrointestinal tract and lungs post-mortem.

Finland, Grisby and Haight[11] reported 250 patients treated with terramycin or aureomycin, chiefly for infections of the respiratory and genitourinary tracts. They noted that the most frequent toxic effects involved the gastrointestinal tract. Fecal cultures of 38 patients who developed diarrhea while on terramycin revealed 27 with hemolytic, coagulase-positive staphylococcus aureus as the only or predominant organism, whereas this organism was present in only 4 to 22 patients on aureomycin. In most cases the diarrhea subsided rapidly and normal flora returned when oral administration was stopped and general measures were instituted soon after the diarrhea started. Most cases occurred 2 to 9 days after the start of antibiotic therapy. Two deaths were due to staphylococcal diarrhea. Six patients on terramycin and 1 on aureomycin were debilitated by staphylococcal diarrhea, and died 2 days to 4 weeks after the diarrhea had lessened or stopped. Diarrhea with or without nausea or vomiting occurred in 18.6% of patients on terryamycin and 9.5% of those on aureomycin.

Several factors relating staphylococci to acute enteritis which have not been discussed above will now be considered. Staphylococci of significance are almost all hemolytic and coagulase positive. The organism is referred to as micrococcus pyogenes var. aureus, as staphylococcus aureus, or simply as micrococcus or staphylococcus. As has been mentioned before, increasingly large numbers of cases of acute enteritis are associated with the presence in the intestinal tract of staphylococci which are resistant to antibiotics. Although most cases were associated with staphylococci which were resistant before they entered the patient's gastro-intestinal tract, some cases are considered to involve organisms which became resistant only after antibiotic therapy in the patient who subsequently developed enteritis.

Staphylococcal enteritis has occurred when antibiotics have been given by parenteral as well as by oral routes, and the condition has even occurred in patients who received no antibiotics. Keidan and Sutherland[18] reported the case of a child with impetigo who received aureomycin to the face only, and subsequently developed a staphylococcal gastroenterocolitis. Dearing and Heilman[3] reported a patient with emphysema who received no antibiotics. Moderate diarrhea, fever and exhaustion developed, and stool culture revealed a moderate number of M. pyogenes as well as E. coli. Almost every one of the commonly used antibiotics has been incriminated in the production of staphylococcal enteritis.

Methods of culturing stool for enteric pathogens will ordinarily not allow staphylococci to grow. If staphylococci are suspected to be present in the stool, special methods must be employed to culture them. Blood agar is effective, as is a special nutrient agar containing 0.25% phenylethyl alcohol, which inhibits Gram-negative bacteria. A rapid and effective means for determining the presence of staphylococci is to Gram-stain a smear of diarrheal stool or rectal swab. Speare,[27] and others, suggest the possibility that staphylococci may have

been present in earlier cases of pseudomembranous enterocolitis, but were not found because they were not sought with adequate care.

Staphylococci isolated from the intestinal tract or patients who had enteritis following antibiotic therapy produce an enterotoxin. Surgalla and Dack[28] demonstrated this by feeding the supernatant of culture media in which the staphylococci were grown to monkeys, who developed symptoms similar to those of staphylococcal enterotoxin food poisoning.

Staphylococcal enteritis involves a toxemic element. Fairlie and Kendall[8] wish to consider the condition not as staphylococcal enteritis but as toxicity from disturbed intestinal ecology, the manifestations including not only enteritis but also systemic effects such as hypotension and azotemia. Terplan *et al*[29] reported 8 instances of fulminating gastroenterocolitis caused by staphylococci in post-operative patients. Aside from the gastrointestinal tract changes, necropsy revealed lipoid depletion in adrenals, cloudy swelling in kidneys, some edema and atelectasis of lungs, and cloudy swelling or focal necrosis in hearts and livers. The clinical course and the pathological findings point to a severely toxic state from massive staphylococcal infection of the gastrointestinal tract, but not to septicemia.

Staphylococcal enteritis may be the result not only of infection and toxin production, but also of a hyperergic response of the intestine to a particular staphylococcal allergen, a type of Schwartzman phenomenon, as suggested by Jonassen *et al*.[17]

The presence of staphylococci in the intestinal tract can be associated with clinical states ranging from a symptom-free state to death after a fulminating enteritis. Dearing and Heilman[3] reported 6 patients who had staphylococci in their stools without symptoms; 9 with pure cultures of staphylococci in their intestines at operation, who developed no symptoms, but in whom erythromycin had been started post-operatively; 22 who had diarrhea with staphylococci in their stools, and improved after erythromycin; and 7 who died after severe diarrhea and shock. Four of the 7 had pseudomembranous ileocolitis and staphylococci; 1 had staphylococci but no autopsy was performed; and of the remaining 2, 1 had pseudomembranous ileocolitis but no staphylococci, and the other had staphylococci and peritonitis, but no gastrointestinal lesions.

There has been no increase in incidence of pseudomembranous enterocolitis associated with the post-operative state alone during recent years, according to Pettet *et al*,[24] who reported 94 fatal cases from the Mayo Clinic between 1925 and 1952. The surgery need not involve the intestinal tract. Acute enteritis has complicated the course of recovery after operations as varied as pulmonary lobectomy, mastectomy, exploration of the adrenal glands, debridement of burns, and urinary cystotomy, as well as a great variety of operations on the intestinal tract. Shock is a major component of the clinical picture of acute post-operative enteritis, as well as enteritis in non-surgical conditions. The question of whether shock is primary or secondary to the enteritis, and the pathogenesis of the shock have received much attention and will be discussed next.

Penner and Bernheim[22] in 1939, emphasized the primary nature of shock. They reported a series of 40 cases of

acute post-operative enterocolitis, in each case of which there was serious shock. The authors stated that the intestinal tract is very vulnerable to damage by an intense compensatory vasospasm as part of post-operative homeostatic mechanisms in response to shock, and reconstructed a histologic pathogenesis of the enterocolitis. The earliest change consists in marked distention of the capillaries and venules, first in the submucosa and subsequently in the mucosa. This is followed by marked submucosal edema and occasionally focal hemorrhage in the vicinity of the distended vessels (diapedesis). The arterioles frequently appear to be contracted. The next change consists in focal necrosis of the mucosa, frequently limited at first to the tips of the mucosal folds. With advance of the lesion the areas of mucosal necrosis spread and fuse. The necrosis extends through varying depths of the intestinal wall, although in most cases not beyond the submucosa. In the advanced stages, the necrosis is accompanied by an inflammatory cellular reaction, and hyaline thrombi are seen in many of the smaller vessels. The focal nature of the lesion is striking. The authors did not feel in a position to evaluate the importance of infection of the intestinal wall by the bacterial flora of the lumen. That infection occurs was evidenced by the purulent nature of the later stage of the lesion. It was absent in the earliest phases. Bacteria were seen only on the mucosal surfaces. In 1948, Penner and Druckerman[23] reiterated the prime nature of shock, and also mentioned that intubation of the intestinal tract does not predispose to the focal and diffuse lesions of the digestive tract (from the lower esophagus to the rectum) unless shock is present.

Pettet *et al*,[24] at Mayo Clinic, reported that shock was not the earliest sign, although it was present in almost all of their 94 cases of post-operative membranous enterocolitis at some time before death. Shock usually occurred after other gastrointestinal signs. At necropsy they found extensive denudation of the intestinal mucosa with tremendous exudation of fluid into the lumen. They therefore felt that the presence of shock was not surprising. Dixon and Weissman[4] also felt that shock was not primary in their 23 reported cases of acute pseudomembranous enteritis or enterocolitis encountered as a complication following intestinal surgery. Although circulatory collapse was almost invariably present, and associated with the clinical onset of intestinal complications, the interval between the state of severe shock and death was so brief in many cases that it seemed unlikely that extensive pseudomembranous lesions could have developed as a result of, or subsequent to the state of circulatory deficiency.

Constitutional disease states such as severe pyemia, septicemia, and cachexia from any cause may be complicated by acute enteritis. Surgery is not a necessary factor. Intra-abdominal diseases such as peritonitis, carcinomas, and intestinal obstruction can lead to secondary enteritis. These factors are emphasized by the following reports.

Pettet *et al.*[24] reported 94 patients who died post-operatively with pseudomembranous enterocolitis confirmed at autopsy. Of these, 41 had intestinal carcinoma, and 26 had some degree of pre-operative intestinal obstruction. Dixon and Weissman reported 23 cases of acute pseudomembranous enteritis or

enterocolitis in patients who had had intestinal surgery. Of these, 12 had frank generalized or localized peritonitis at necropsy. Kleckner *et al.*[19] reported 14 cases of pseudomembranous enterocolitis in which the disease was not preceded by operation. Of these, 5 had large intestinal obstruction, associated with carcinoma in 4; 5 had associated heart disease; and 3 had severe infections.

Clinical Aspects Acute enteritis can be a rather mild illness with transient diarrhea, or it can be a fulminating and fatal disease. The course of fulminating acute enteritis of any etiology is fairly constant. The patient usually has diarrhea of rapidly increasing severity, dehydration, shock, temperature elevation, and death occurs within a very few days. The exact time and frequency of occurrence of the individual signs and symptoms vary among the different series of cases reported. Diarrhea and toxemia are invariably present in staphylococcal enteritis. Diarrhea is present in only ⅓ of cases of enteritis without staphylococci. Other frequent findings are abdominal pain and distention, the picture of paralytic ileus, vomiting, restlessness and mental confusion.

The clinical similarity between fulminating staphylococcal enteritis and Asiatic cholera has been noted by several authors, and expressions such as "le syndrome choleriforme de la terramycine," have been used by Janbon,[16] and others. The laboratory findings in fulminating enteritis can be any of those associated with shock, electrolyte disturbances, toxemia, and infection.

It is impossible to foretell which patient may develop acute enteritis. Diarrhea in any hospitalized patient should alert the physician to determine the cause of the diarrhea, to treat the cause and the diarrhea, and to prevent serious fluid losses and electrolyte imbalances. Stool specimens should be sent for culture for enteric pathogens and staphylococci and for antibiotic sensitivity studies. A Gram-stain of the stool should be made to determine the presence of staphylococci. Because diarrhea may not be a symptom of nonstaphylococcal enteritis, the unexplained onset of generalized abdominal pains, distention, paralytic ileus, fever, shock, or mental changes in any patient should arouse the suspicion of the possibility of acute enteritis.

Care should be observed in the use of antibiotics. It has been suggested that patients receiving antibiotics be given vitamin supplements, and possibly also milk containing lactobacilli which are resistant to antibiotics (in an attempt to prevent the overgrowth by staphylococci). Diarrhea in the face of antibiotic therapy requires careful control. If diarrhea increases in severity, the antibiotic which has been administered should be stopped, and stool studies instituted. If the situation is urgent and staphylococci are seen on the smear of the stool, the antibiotic should be started which is thought to be effective against the staphylococci prevalent in the hospital. When sensitivity studies are available, changes in antibiotic therapy can be made. If the situation is not urgent, sensitivity studies can be awaited while the patient is kept under careful observation. Cathartics or enemas may precipitate acute enteritis in patients receiving antibiotics, and should be used with caution.

Shock should be anticipated, and prompt and virogous standards meas-

ures used to combat it. ACTH, cortisone, and hydrocortisone have been used with recovery of patients, by Jonassen *et al.*,[17] and Proheska *et al.*[28]

Summary and Conclusions

Acute enteritis has long been recognized as a post-operative complication. The recent increase in cases of acute enteritis has been associated with the use of antibiotics and with the prevalence of staphylococci which are resistant to antibiotics. There is as yet no established common etiologic basis for all cases of enteritis associated with surgery, antibiotics or staphylococci. These three factors, singly and in many combinations, can predispose to or cause enteritis. A primary enteritis can be caused by the toxic or irritative effects of antibiotics, and another primary enteritis can be caused by staphylococcal enterotoxin.

All cases of acute enteritis associated with antibiotics, staphylococci or surgery are characterized by two basic types of pathological changes, catarrhal and membranous. Almost all cases present similar clinical findings, reflecting the limited number of ways in which the intestinal tract reacts to injury. The presence of enterotoxin-producing staphylococci imparts a toxemic element which is generally not present in acute enteritis unassociated with staphylococci. The treatment of acute enteritis involves the use of appropriate antibiotics if staphylococci are present, as well as measures to counteract shock, fluid, electrolyte imbalances.

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EVERY ABDOMINAL INCISION is a potential hernia. Care and time should be spent to approximate accurately the components of the wall. Secondary support may be maintained by careful adhesive strapping of the wound. Post-operative distension is minimized by gentle manipulation during surgery and by early ambulation following the operation.

—From SURGICAL TECHNIGRAMS by F. M. Al Akl, M.D.

Clinico-Pathological Conference

Cleveland Clinic Hospital

A 28-year-old man from West Virginia entered the Cleveland Clinic on July 2, 1955. He said that he had been in good health so far as he knew until two months previously when he had had an abrupt onset of pain in the right costovertebral angle, fever and vomiting. His condition had been diagnosed as a kidney infection and treated with penicillin and "sulfa." The symptoms cleared in four or five days after treatment. Following that, the patient felt weak, had anorexia and lost 27 pounds in weight.

Two weeks prior to admission, the patient had been especially weak during the day and retired early. He got up in the middle of the night to go to an outside toilet. During the walk to the toilet, he suddenly lost consciousness. There was no dizziness, pain or palpitation. He awoke lying on the ground with a cut on his head. His skin was cold and clammy. He was seen the next day by a physician who recorded his blood pressure as 190/130mm. Hg. Small hemorrhages were present at that time on the right fundus.

Laboratory studies at home showed a 6% eosinophilia, a negative Regitine test, and a positive urine culture for *Escherichia coli*. An intravenous pyelogram showed an elongated left renal shadow; the right renal shadow was smaller than the left. His blood pressure had last been taken in 1946 prior to his discharge from the Army. No mention was made at that time of any hypertension. Both parents are living; his mother has had hypertension since 1941 when another son was killed. There was no other family history of hypertension. As a child the patient had measles, mumps, chicken pox and whooping cough.

Physical Examination The patient was a well-developed undernourished white man. Pulse was 80 and regular; blood pressure was 210/120 mm. Hg. The skin was normal. The pupils were round and equal and reacted to light and accommodation. The extraocular movements were normal. Fundoscopic examination demonstrated blurred disc margins. The retinal arteries were seg-



Fig. 1. Aortogram. Note abrupt loss of opacity of right renal artery and vessel to lower pole.

mentally constricted and showed a v/a ratio of 2:1 with an increase in light reflex and two splinter hemorrhages in the right fundus. The findings on the remainder of the physical examination, including peripheral pulses, were normal.

The patient was hospitalized during which time his blood pressure remained elevated with the highest level up to 220/150 mm. Hg.

Laboratory Studies Hemoglobin concentration was 16 gm. per 100 ml.; hematocrit, 52%; white blood cell count, 11,900 with 73% neutrophils; 1% eosinophils, 24% lymphocytes, and 2% monocytes. Serology was negative. Blood sugar content was 70 mg. per 100 ml.; blood urea, 21 mg. per 100 ml. The urea clearance test showed 90% excretion in the first hour and 100% the second hour. An Addis urinary examination showed: specific gravity of 1.016, pH of 7, and protein of



Fig. 2. Photograph of right kidney. Upper arrow points to thrombus and lower arrow to normal renal tissue.

2.5 gm. per 24 hours; red blood cells per 12 hours were 1,200,000; white cells per 12 hours were 6,000,000; casts were 90,000 per 12 hours. Repeated routine microscopic urine studies showed only an occasional polymorphonuclear leucocyte.

Findings on roentgen study of the chest were normal. The chest measured 28.2 cm. in diameter; the heart 11.2 cm.

Discussion

DISCUSSANT: *William L. Proudfit, M.D.*, Department of Cardiovascular Disease, The Cleveland Clinic Foundation.

Dr. Proudfit: This man's illness began dramatically with sudden severe pain in the right costovertebral angle accompanied by fever and vomiting. Unfortunately, we do not know whether he had normal blood pressure at that time. Six weeks later he was hypertensive and had small retinal hemorrhages; and on admission, two months after the original illness, there was papilledema. Marked hypertension, weight loss, and eye ground changes are characteristic of malignant hypertension.

Two conditions might be responsible for the acute illness followed by the development of malignant hypertension: pyelonephritis and a vascular accident. Certainly pyelonephritis would be the first possibility to be considered. In the absence of a lesion resulting in ureteral obstruction one would not expect acute pyelonephritis in a man of this age group in apparently good health otherwise. The reported therapeutic response to penicillin and sulfa therapy may have been coincidental.

It is rare for acute pyelonephritis to be followed by malignant hypertension after such a short interval. The proteinuria and increased numbers of erythrocytes, leucocytes, and casts in the urine could be due to malignant syndrome alone. The number of leucocytes was considerably elevated above the normal of 1,000,000 per 12 hours, but in pyelonephritis the count usually is much higher. Furthermore, repeated urinalyses showed only an occasional leucocyte.

The *E. coli* reported in the previous urine culture may have been a contaminant. Finally the pyelogram showed nothing to suggest ureteral obstruction or renal lithiasis. The small kidney on the right side is interesting but one would not expect a shrunken kidney from pyelonephritis in a period of two months.

Arterial Lesion Occlusions of the renal artery might result from embolus, thrombus, or an arteriosclerotic plaque. There is nothing in the history to suggest that this man may have had auricular fibrillation, myocardial infarction, myocarditis or subacute bacterial endocarditis. A localized lesion in the renal artery should be considered.

The history could be explained on the basis of partial or complete obstruction of the right renal artery. Such arterial lesions may cause a dramatic illness followed by the development of hypertension. Certainly the age of the patient is unusual for a degenerative arterial disease, although lesions of the arteries elsewhere in the body occasionally are seen in youth.

The pyelogram may show adequate excretory function in the affected kidney, although the size of the renal mass may be decreased, as in this patient. Roentgen evidence of a calcified plaque in the region of the renal artery would be helpful but it was not reported here.

The crucial diagnostic test in this case is renal angiography. On the basis of available evidence, a lesion of the right renal artery seems to be the most likely diagnosis.

CLINICAL DIAGNOSIS: *Malignant hypertension*—due to localized lesion of renal artery.

Eugene F. Poutasse, M.D., Department of Urology, The Cleveland Clinic Foundation.

The sudden onset of severe hypertensive vascular disease in a patient 28 years of age should be considered a secondary type of hypertension until proven otherwise. At his age the most likely cause of secondary hypertension would be a renal lesion. The intravenous urogram is an important diagnostic step and the kidneys must be studied very carefully.

In a kidney that appears smaller than its mate but is otherwise normal by intravenous urography, the possibility of renal arterial lesion must be considered even though the excretory function may appear normal.

The only method which can be used to make a definite diagnosis of such a lesion is renal angiography as accomplished by the technique of translumbar aortography.

In this patient's aortogram (Fig. 1) a normal left renal artery was visualized, but on the right side a complete obstruction of the main artery was present at the hilum of the kidney. Proximal to this obstruction there was a large branch which extended into the lower pole of the kidney; this branch carried sufficient blood to maintain part of the kidney in normal status, hence, the apparently normal function on intravenous urography. The upper part of the kidney appeared to be avascular.

This complete obstruction of the main portion of the renal artery is consistent with an arteriosclerotic occlusion with thrombosis. The sudden onset of the patient's pain two months prior to his admission to the hospital also is consistent with sudden thrombosis of the renal artery with infarction of at least part of the kidney.

If the entire kidney had been infarcted by the lesion it is doubtful that any hypertension would have resulted, the kidney would have probably atrophied.

With this finding, operation is mandatory; and one could predict that the patient would have complete remission of the hypertensive vascular disease following removal of this partially infarcted kidney.

At operation the upper part of the kidney had a yellow zone of infarction, the middle portion was bluish, and the lower pole had a normal appearance; the kidney was removed. Immediately following the operation the patient's blood pressure returned to normal, in fact, for the first 24 hours considerable difficulty was encountered in keeping the patient out of shock due to the sudden reversal of the hypertension.

Pathological Findings

Lawrence J. McCormack, M.D., Department of Pathology, Cleveland Clinic Foundation.

The surgically ablated kidney weighed 126 gm. Its capsule was flimsy and stripped readily leaving a surface, Venetian-red for the most part, and showing fetal lobulations. At the superior pole was a tan elevated area, 3.0 by 2.5 cm. with a central depression (Fig. 2). A similar tan area, 2.5 cm. in diameter, was present in the inferior pole. On cut section, the cortex in the midportion of



Fig. 3. Photomicrograph. Cross section of right renal artery at level of occlusion by plaque. Thrombus is in muscular layers at this point. Elastic-Van Gieson; X15.

the kidney measured 3 to 5 mm. in thickness; the cortex at the inferior pole in the area of bulging, measured 6 mm. in thickness. The cortex in the region of the superior pole varied from ill-defined to 6 mm. in thickness. The same color changes were present on cut section.

The renal artery segment measured 4 cm. in length and showed several important changes. A small branch arose from the renal artery and passed to the lower pole 0.6 cm. proximal to the main arborization of the vessel. Just distal to this arborization, the renal artery appeared completely occluded by firm mass of mottled red and tan thrombus. The renal artery appeared dilated in this area and measured 1.5 cm. in circumference. It abruptly narrowed and still appeared occluded.

Careful histologic study demonstrated almost 80% occlusion of the vessel in the region of abrupt narrowing by an eccentric fibrous plaque, which protruded into the lumen of the artery. A most curious set of circumstances existed just proximal to this area. The dilatation in part was due to the presence of a partially organizing thrombus in the outer layers of the muscular coat. This clot pushed the lumen of the renal artery to one side and compressed it (Fig. 3). On further sections it was determined that there was a break in the internal elastic lamina and the thrombus was in a small dissecting aneurysm that occurred proximal to the area of eccentric arteriosclerosis.

There was also evidence of marked

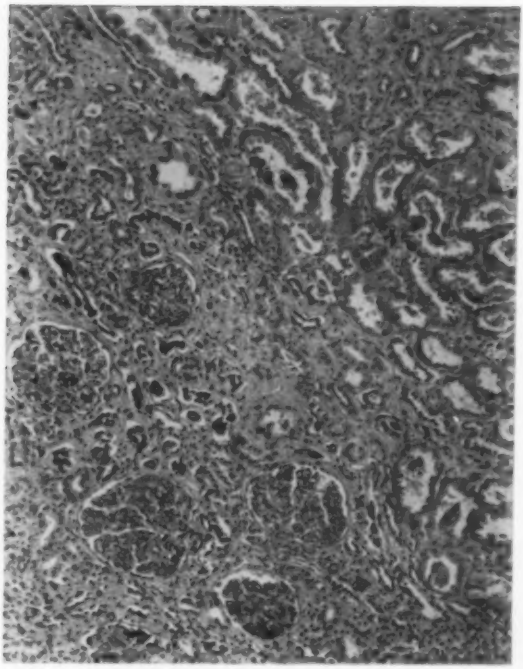


Fig. 4. Photomicrograph. Junction between normal and atrophic kidney in lower pole. Note retention of glomeruli. Hemotoxylin and eosin; X100.

microscopic change within the renal parenchyma. A portion of the gross changes seen in the superior pole was due to the presence of an old infarction which was marginated by a small amount of normal-appearing renal parenchyma. An abrupt transition was present between this normal parenchyma and the majority of the remaining kidney. Most of the remaining kidney showed marked atrophy of the renal tubules with preservation of the glomeruli. The small bulge in the inferior pole was apparently the area supplied by the patent branch and the renal parenchyma in this area was normal, again sharply marginated from the atrophic areas (Fig. 4).

It was the small areas of normal parenchyma then that were responsible for sufficient function of the kidney to produce normal urographic findings. These changes in the renal artery and kidney are for the most part characteristic of those we have seen where there has been a variation between the urographic findings and the arteriographic findings.

The abrupt zone of transition from normal-appearing parenchyma to that of atrophy has uniformly been present in those kidneys. In those cases where the entire renal artery has been involved by the arteriosclerotic process, the entire kidney has appeared atrophic, but not totally destroyed.

When we originally reported several cases of hypertension associated with renal arterial disease in young people, we believed it to be a rare circum-

stance.[1] However, further careful study of these patients has demonstrated the lesion with ever-increasing frequency.[2, 3]

ANATOMICAL DIAGNOSIS:

- Arteriosclerosis, severe, right renal artery.
- Dissecting aneurysm, local, with thrombosis, right renal artery.
- Subtotal atrophy of kidney with focal preservation of renal parenchyma in the superior and inferior poles.
- Cortical infarct, old, superior pole, right kidney.

Comment

Dr. Poutasse: The clinical course of this patient has been that of what we call malignant nephrosclerosis reversed. He has now maintained a blood pressure for the past two years, ranging from 116/74 to 140/90 mm. Hg.

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PERRIN H. LONG, M.D.

EDITORIALS

1975

We are witnessing a phenomenon which is having and will have a profound effect on the life of each of us, on the future practice of medicine, and on the economy of our country. The phenomenon to which I have alluded is the combination of our increasing expectancy of life, and the continuing high birthrate which this country has had for more than a decade.

Recently, Population Index[1] has published data which was presented at the 1957 meeting of the Population Association, which was held on May 4 and 5 in Philadelphia. Under the chairmanship of Dr. Frank W. Notestine, Office of Population Research, Princeton University, a symposium was held on "The Size, Composition, and Distribution of the U. S. Population in 1957" at this meeting. Initially, Conrad Taueber of the U. S. Census Bureau reported that if current projections for population growth to nineteen seventy-five, using the present fertility rates (25.4 birth per 1000),

are valid, those under twenty years of age in our country would number about ninety-two million souls, while the total population of the U. S. would be two hundred and twenty-eight million people. However, if the rates of nineteen thirty-nine prevail (18 births per 1000), there will be seventy million people in the country aged twenty years or younger, and the total population will number two hundred and six million individuals. This is something to think about, because instead of our population becoming older it is actually growing younger. In nineteen twenty, the median age of our population was twenty-five years, in nineteen fifty-one it was thirty years, and in nineteen seventy-five it is predicted that the median age will have fallen to twenty-six years. Come what may, we have rapidly exceeded all predictions on the status of our population which were made prior to World War II.

The problem of the color and nativity of our population in nineteen seventy-five was discussed by C. O. Pierce of the University of North Carolina. He pointed out that from nineteen ten to nineteen fifty there was a decrease of from 14.5 to 6.5 percent in the foreign born in this country. By nineteen seventy-five it is expected that only three percent of our population will be foreign born. Present data indicate that a radical increase in the non-white population in this country is not to be expected, and that in nineteen seventy-five but twelve percent of our people will be non-white citizens. However, the distribution of this segment of our population will change. Whereas in nineteen hundred, ninety percent of this segment of population resided in the Census South, and in nineteen fifty this percentage was sixty-eight, it seems without doubt that more than fifty percent of our non-white population will be living outside of the Census South, and will be concentrated in urban areas in the Northeast, and North Central states, and California. New York City (and especially Brooklyn) will experience a marked increase in its non-white population in the next seventeen years.

From the point of view of members of our profession, the predictions as to the future distribution of the population of the United States are of special interest, as they give us indications as to favorable areas for practice in the future. This was discussed at the symposium by J. S. Siegel of the Census Bureau. States in the West will continue to gain rapidly in population, and by nineteen seventy about one-eighth of the population of the U. S. will reside in the Pacific States. Our current ten largest states will also gain in population, so that by nineteen seventy-five more than fifty-six percent of the population will live in these states. Populations in city areas proper will decrease (New York City seems to be experiencing this already), but both the population, and the population density, will go up in surrounding metropolitan counties.

By nineteen seventy-five a population larger than that inhabiting the continental U. S. in nineteen fifty will be living in the two hundred major metropolitan areas in this country, if current fertility rates prevail, according to the

data presented by R. P. Cuzzort, University of Chicago. At the present time, fifty-eight percent of the population of a standard metropolitan area lives in the central city. By nineteen seventy-five this should fall to less than fifty percent. Currently, thirty-eight percent of our population living in metropolitan centers of over one hundred thousand persons is domiciled in the Northeastern States. By nineteen seventy-five this percentage will fall to thirty-two. In nineteen hundred, today's principal metropolitan areas of the west and south contained one-fifth of the metropolitan population. In nineteen seventy-five, it is estimated that these areas will contain over two-fifths of the metropolitan population. This would amount to over sixty million people.

We have already heard the initial rumblings of the crisis in educational facilities which is developing for the elementary-school age group over most of the country. The data presented by C. M. Frisen, Department of Finance, State of California, on the possibilities for school and college enrollment in nineteen seventy-five should make us all stop and think. If current fertility rates are maintained, there will be about forty million elementary-school children, about sixteen million high-school students, and nine million college students in nineteen seventy-five. Today we count about twenty-seven million elementary-school children, eight million high-school students, and three million college students. In seventeen years the number of high-school students will have doubled, while the number of those in college will have tripled. Where the money for these educational facilities will come from, will constitute a major headache for educators and taxing authorities alike. Certainly, for one thing, education will have to be reduced to fundamentals, and frills, both in plant and in curriculum, done away with. One can add that if this population trend continues, about three hundred thousand practicing physicians will be needed by nineteen seventy-five. With our medical educational facilities jammed, and with no real expansion in view, where these additional physicians will come from (unless from foreign countries) is problematical.

If current predictions are borne out, the slogan in nineteen seventy-five will be "full employment for ninety-four million workers." This will be the estimated labor force in that year. It will be a younger labor force than today, and a little over a third of this force will be women. At that time, according to D. L. Kaplan of the Census Bureau, the working week will not be four days, nor will the working day be six hours, but rather a thirty-five-hour work week. He feels that workers and their families will want a sharply rising standard of living too strongly to permit a revolutionary cut in hours-input to ruin gains in productivity. Kaplan also believes that the number of employed individuals holding second (part-time) jobs will increase markedly. The thirty-five-hour week facilitates this for the worker and also creates part-time jobs.

The journey to work will be different in nineteen seventy-five, according to L. F. Schore of Michigan State University. He points to two outstanding

trends in commuting: (1) the average distance between home and work is increasing; and (2) a progressively higher proportion of work trips is made by private vehicles. He does not believe that the outward thrust of the residential population will be curbed in the near future, and he expects the current decentralization of work places and buying areas to continue. With such types of decentralization over the country, lateral movement in complicated cross-currents of commuter traffic will become increasingly common, thus slowing down the rate of travel and increasing the time of the trip to work. It is of importance to remember that when autos are used for commuting, the road and its maintenance are often paid for by those other than the commuter. However, he himself pays in time, money, and energy for commuting.

Despite the probability that the power and speed of automobiles will be increased by nineteen seventy-five, that families owning cars will be more numerous, and that congestion on highways will be greater, as the mileage of our roads and streets will not increase much, it is believed that the present fatality rate of 6.3 per hundred million vehicle miles will be reduced to 4.6 for all roads, and on interstate roads to 3.3. Our greatest number of deaths on the highways was forty thousand in nineteen fifty-six. In nineteen seventy-five, it is estimated that fifty-one thousand traffic fatalities will occur, according to S. T. Hitchcock, Bureau of Roads.

Just after World War II, in nineteen forty-six, there were two million three hundred thousand marriages in the U. S. Currently, about one and one-half million marriages are taking place each year. This number will grow slowly for the next few years simply because the late nineteen thirties were relatively lean years as far as babies were concerned. However, beginning about nineteen sixty a gradual pickup in marriages will occur as a reflection of the increasing birthrates in the war and post-war years, and in nineteen seventy-five, it is estimated that two million one hundred thousand marriages will take place and that the median age of the women being married will be 19.7 years. Between now and nineteen seventy-five, households containing a wife and husband may be increased by thirteen million, and there may be fifty million such families in the United States, with the total number of households of all types (married, single, etc.) increased from twenty million to sixty-seven million. At that time, according to E. Landau of the U. S. Census Bureau, new households will be increasing at a rate of more than a million per year.

Currently, and this will be true until nineteen sixty-five, the population outside of the working ages is growing two to three times as fast as that between twenty to sixty-five. The fact that we are currently witnessing, in our relative lack of unemployment, the effects of the low birthrates of the 'thirties and early 'forties must be understood by all who are interested in our economic scene. Furthermore, this fact will make the current transition to automation easier.

However, in a few years (nineteen sixty-five), we will see the large birth classes of the postwar period entering

the labor force. If our current birthrate is maintained, however, the number of persons outside the working force will still number more than those who constitute the labor force. To the contrary, if the birthrate should fall back to its level of the nineteen thirties, then *the population of the working group would increase four times as rapidly as that of the dependents, and the U. S. would be forced to make major and sharp economic adjustments to this new situation.* Thus it would seem that the maintenance of our current economic system and of our standards of living from now on appear to require a high birthrate, whether or not we like the idea of our country becoming more and more crowded.

There appeared to be considerable discussion and difference of opinion at the symposium relative to the makeup of the farm population and agricultural labor force in nineteen seventy-five. To begin with, there is no question but that the farm population is decreasing. Between nineteen ten and nineteen fifty-six, roughly ten million people were lost from the farms. Currently, thirteen percent of our population are farm dwellers, and almost seven million people are in the agricultural labor force. Estimates of the size of this force in nineteen seventy-five vary from five million, as postulated by Professor Black, to two million, as estimated by Professor Colin Clark. L. J. Ducoff of the U. S. Department of Agriculture, in reviewing these predictions, thought that the agricultural labor force would number 4.6 to 5.2 million people in nineteen seventy-five. Any way one looks at these data, the fact remains that both farm population and agricultural labor force will show further decreases by nineteen seventy-five. It would appear that the economic position of the farmer would be markedly improved, while his political importance as a voting bloc will have declined appreciably at the national level.

Bruce Waxman of the University of Chicago presented interesting data on old people in nineteen seventy-five. At that time, about twenty-one million of the population (twelve million females, nine million males) will be over sixty-five years of age. Of this group, sixteen percent will be foreign born. It seems likely that this group should be better prepared for being senior citizens than this group is at present, because roughly one-third of these individuals will be high-school graduates, and thirteen percent of them will have had one or more years of college. The majority of these older people will live in urban areas, and because of climatic conditions, many will be in the Gulf states or in the states of the Southwest. In these states it is likely that the elderly will be politically significant.

The labor-force participation of the older age group is expected to decrease percentage-wise by nineteen seventy-five, but because of the increased number of people in this group, there actually will be about one million more older individuals participating in the lafor force than at present.

This older group will be of great interest and significance to physicians. It is estimated that at least a quarter of them will have a permanent disability. This disability will be minor in forty

percent and major in sixty percent of this group. Data was presented at the symposium which indicated that one can expect eleven million three hundred thousand instances of disabling illness of one or more days' duration in the older age group, and, as would be expected, arterial disease (heart, stroke, renal) will produce the majority of deaths. There can be little doubting the fact that illness in these older citizens will be one of our major problems as physicians in practice in nineteen seventy-five.

An alarming phenomenon that many of us are greatly concerned with today is the data which indicate that hospital facilities are rapidly falling behind the health needs of the aging population. In the period nineteen forty-six to nineteen fifty-two, hospital beds of all types increased at an average of 1.2 per annum. If this rate of increase is maintained, the number of general hospital beds should increase to seven hundred and thirty-four thousand, thus making the rate of 35.5 general hospital beds per 1000 population of sixty-five or over. Currently there are over forty-two general hospital beds per 1000 aged. This means that the average yearly accretion rate of general hospital beds must essentially be doubled in the next seventeen years, if the ratio of general hospital beds for the aged which exists today is to be maintained. One cannot help but look on the health and social problems of our older citizens with increasing pessimism. Politicians and professional do-gooders are shrieking to the housetops about their interest in the aged. Committees and council for the problems of the aged are organized and reorganized. Politicians and political administrators appoint, fire, and reappoint co-ordinators, directors, and investigators of problems of the aged. Legislators at the local, state, and national levels are all for the aged on election day but do little else but talk about them at other times. And while all of this noise is being made about the aged, actually very little is being provided in the way of adequate housing, recreational centers, medical and eventual care facilities for these people. The reason for all of this is simply that proper maintenance of these older individuals costs money, and to date neither we as citizens, nor the politicians as politicians have thought it worth while to spend the money which would be needed to meet this problem in a rational fashion. In fact, from what I see of the problems of many older people, the attitude of their relatives and of society in general can be best summed up in the old phrase, "Out of sight, out of mind." And nineteen seventy-five is only seventeen years away.

[3] Population Index. Vol. 23, no. 2, pp. 201-211. July, 1957.

THE LONG AND SHORT OF IT

From Your Editor's Reading

Current Concepts on the Management of Shock

"In the handling of a patient with shock it is essential to identify the underlying cause in order to plan rational treatment. On the basis of information presently available, the specific causes of shock have been classified into 6 groups: hypovolemia, cardiac failure, bacteremia, hypersensitivity, neurogenic factors, and obstruction to blood flow. Treatment was discussed with reference to these groups.

Vasopressor agents are helpful in most instances of shock related to cardiac failure, bacteremia, and hypersensitivity. They usually are contraindicated in shock due to vascular obstruction and in hypovolemic shock until optimal replacement of fluid has been achieved. Recent studies have indicated that metaraminol may be the pressor amine of choice because it is therapeutically effective, simple to administer, without risk of injury to skin and subcutaneous tissues, and available for injection without additional fluid (thus especially suitable for patients with renal failure).

Rigorous attention to the fluid and electrolyte state is of special importance. In the presence of acidosis, the response to vasopressor agents is greatly diminished. The

use of molar solutions of sodium lactate to re-establish this responsiveness has met with limited success and seems worthy of trial in selected cases.

Adrenocortical hormones may be of striking benefit in shock due to bacteremia or hypersensitivity when an overwhelming response to inflammation threatens life. These drugs may be used also to augment the effectiveness of vasopressor drugs. Relatively little risk is involved, provided that the periods of employment are short and that antibiotics are used concurrently.

The indications for the use of digitalis glycosides in shock are the same as at other times, and their routine use is of no proved benefit and may be injurious. Atropine is of value when excessive vagal activity with bradycardia produces or complicates the hypotensive state.

Chlorpromazine is of no proved worth in the treatment of shock, and possible benefits achieved with anticoagulants are not established as yet. Preliminary observations suggest that hypothermia may be of some value. The head-down-position provides only transient benefit in patients with shock, and its prolonged or routine use may delay recovery."

By Max H. Weil

Circulation, Vol. XVI, No. 6, Dec., 1957, Pp. 1103-4

Death from Accidents

We hear much about the unnecessary waste of human life which results from accidental deaths. We are conscious of the campaigns which are waged to prevent accidental death. What I don't think we know too much about is what has been happening to *accidental-death rates* during the past 50 years. In 1907, the mortality rate (the number of deaths per hundred thousand living people) for accidental death in the country was 100, and the rate for fatal motor vehicle accidents was practically zero. During the next thirty years, while the fatality rate from all accidents except motor-vehicle accidents had fallen to 60, that from motor vehicles had risen to about 30. In 1957, the declining rate for fatal non-motor-vehicle accidents was about to equal, or fall below, the rate for fatal motor-vehicle accidents, which stands at about 26 per 100,000. Thus, it can be clearly seen that while about 100,000 deaths occur per year from accidental causes, the mortality rate from accidents has decreased by more than 40 percent in the last fifty years. This represents a saving currently of at least 65,000 lives per annum. Safety is paying off.

Progress in Health Services.
Health Information Bureau,
Vol. VI, No. 8, Oct. 1957.

Preliminary Findings of the Effect of Automotive Safety Design on Injury Patterns

"Several thousand cases of injury-producing automobile accidents have been studied. The incidence of multiple injuries as well as multiple body areas injured is striking. Specific objects that cause injuries following crash impact are discussed and their relative importance is listed. Recent safety design engineering in its relative infancy apparently has decreased frequency and severity of injury as determined by the preliminary comparison with representative control data.

Seat belts, as studied in 162 cases of automobile accidents, seem to lessen dramatically the severity and frequency of injuries. It is believed that these for-

ward steps in safety design have been concrete in their accomplishments. This type of engineering solution is based on medical findings and when linked with public acceptance of the inherent value of such protection may well lessen the toll on the lives and well-being of more than 150,000,000 people who use the automobile as the common denominator of transportation."

By Paul W. Braunstein and John O. Moore, and Preston A. Wade
Surgery Gynecology & Obstetrics,
No. 105, Sept., 1957, P. 263

A Survey on Early Ambulation After Surgery

"The replies received to a questionnaire on present practices with regard to early ambulation after surgery in University and private hospitals throughout the United States indicate that the idea of this procedure has been universally accepted, but that the principles and rationale are as yet incompletely understood. There is no longer any doubt that patients should not be confined to bed for prolonged periods after operation. Nevertheless, only a small minority of surgeons practice early ambulation in a way that will be of most benefit, considered in the light of the pathophysiology of the trauma syndrome. The great majority still fail to employ ambulation early enough after recovery from the anesthetic and with sufficient frequency during the immediate postoperative period to counteract effectively the impairment of circulatory, pulmonary, and digestive function resulting from the operation.

"It is hoped that the present re-emphasis on the rationale of early ambulation will persuade those who believe they are using ambulation effectively after surgery, to examine their present practices in the light of principle. The present survey demonstrates that judicious ambulation, when vigorously applied, causes no ill effects to the surgical patient. The 5 instances of 'complications' cited in the questionnaires were by individual surgeons who do not use immediate ambulation, but get their patients out of bed from the second to the fifth day after operation. The opinion by surgeons who use ambulation on recovery from anesthesia, or on the day of operation is practically unanimous that it hastens recovery and prevents postoperative pneumonia and pulmonary embolism.

"When the rationale of ambulatory treatment is properly understood, many so-called 'contraindications' become primary indications for vigorous insistence on early and frequent ambulation during the immediate postoperative period. With such an evaluation, it is the surgeon's responsibility, and not the patient's desire, which regulates the time, frequency, and consistent requirement of postoperative walking, in accordance with the patient's needs."

By Daniel J. Leithauser
Surgery Gynecology & Obstetrics,
Vol. 106, No. 1, Jan., 1958, Pp. 103-4

Amputations in Frostbite

"1. Amputation is required in most cases of third-degree frostbite. If the damage is extensive enough and a diagnosis can be made, immediate amputation at a predetermined site may be indicated.

"2. Supportive measures are important in maintaining the patient in good general condition to undergo definitive

treatment and to promote healing of amputation stumps.

"3. Anticoagulants appear to be indicated, not to repair the damage in severely injured tissues, but to prevent retrograde thrombosis and allow more conservative amputation.

"4. Rate of thawing is still a controversial point, but experimental work suggests that rapid thawing is slightly superior.

"5. Sympathectomy is of questionable routine value, but in the presence of peripheral vascular disease is of some benefit if done early. In the late complications including hyperhidrosis and causalgia, it appears to have a definite place."

By R. G. Davis

The Canadian Medical Association Journal, Vol. 77, No. 10, Nov. 15, 1957, P. 952

Early Surgical Treatment of Abdominal Injuries in the Traffic Victim

"1. A review of 1,988 records of traffic victims seen at Highland Alameda County Hospital in Oakland, California, in 1955, reveals the regularity in occurrence of accidents month after month predominantly involving the male younger than 30 years of age. The manner in which the accident occurred, the subsequent care of the patient, and the type of injury have been presented.

"2. Only 2.2. per cent of all patients had any abdominal signs or symptoms. The medical records of these 44 patients with abdominal symptoms were reviewed, with emphasis on the 12 patients who underwent abdominal exploration, 7 of whom lived and 5 of whom died.

"3. There were 45 deaths in the entire series and 20 of these, or 44 per cent, were associated with abdominal injuries. In order to combat this high mortality in traffic victims, early thorough abdominal exploration is indicated in patients who have abdominal symptoms which persist or increase in severity, irrespective of the development of signs and symptoms which involve other systems."

By Grosvenor T. Root and B. H. Christensen

Surgery Gynecology & Obstetrics, No. 105, Sept., 1957, P. 267

A Five Year Survey of 1,055 Consecutive Patients with Extrahepatic Biliary Tract Diseases

"1. Extrahepatic biliary tract disease accounted for 2 per cent of hospital admissions and biliary tract operations for 8 per cent of the surgical procedures performed in our hospital during the years 1948 to 1952 inclusive.

"2. Choledochostomy following cholecystectomy was performed on 24 per cent of our patients, calculi being found in 55 per cent of them. Exploration of the common duct was not followed by higher mortality than cholecystectomy in patients with chronic cholecystitis and cholelithiasis. It was about 6 times as great in patients with acute cholecystitis.

"3. Mortality following acute cholecystitis with cholelithiasis was 5 times that following chronic cholecystitis with cholelithiasis.

"4. Associated cardiac disease in the aged patient contributed greatly to the mortality rate of the patients studied, especially patients with 'acute gallbladders.'

"5. Secondary operations on the com-

mon duct were not as frequent as reported from many other clinics. There were no deaths following operations in this group. The results were good in all patients operated upon for retained stones or stenosis of the sphincter of Oddi. The condition of 50 per cent of patients operated upon for stricture of the common duct was improved, the remaining have recurrent symptoms which are being treated conservatively.

"6. The over-all operative mortality was 3.4 per cent.

"7. The highest mortality occurred in patients suffering from malignant disease of the biliary tract. The most frequent cause of death in this group was metastatic disease and hepatic failure.

"8. Relative mortality was twice as great in the male as in the female.

"9. Cardiac arrest, as a cause of death, occurred in 3 patients and is considered incidental to this series of patients and not peculiar to gallbladder disease.

"10. This review indicates that the majority of patients suffering from biliary tract disease are over 50 years of age. The majority of deaths following operation occur in patients over 50 years of age. The mortality can be greatly reduced, as in so many other afflictions, by earlier diagnosis and by more prompt surgical eradication of the disease."

By J. Reed Babcock and
Robert C. Eyerly
Surgery Gynecology & Obstetrics,
Vol. 105, No. 6, Dec., 1957, P. 716

Lymphangiosarcoma Secondary to Chronic Lymphedema

"Twenty-six cases of postmastectomy lymphangiosarcoma were studied, 21 cases reported by various investigators and 5 cases reported by us. There were, in addition, 2 cases of lymphangiosarcoma of the lower extremity.

"The mean age of the patients at the time of mastectomy was 51.5 years. The mean age at the time of appearance of lymphangiosarcoma was 62 years.

"Lymphangiosarcoma occurred most frequently in the mastectomy patients apparently cured of breast carcinoma. Evidence of metastatic breast carcinoma was present in only 1 patient, and postmortem examination of 4 patients revealed no evidence of mammary carcinoma. The likelihood of recurrences of metastases decreases as the postoperative interval increases, which is a probable explanation for the mean interval of 10 years between mastectomy and occurrence of lymphangiosarcoma.

"The microscopic appearance of lymphangiosarcoma was studied and compared with that of Kaposi's sarcoma. The possibility of blood vessel origin of lymphangiosarcoma could not be excluded.

"The significance of preceding malignant neoplasia, of irradiation, and of chronic lymphedema, as possible predisposing factors was investigated. None could be definitely implicated as the actual causal factor because of inconsistencies; all may play a part.

"The prognosis for patients with lymphangiosarcoma is grave. Most patients died of pulmonary metastasis within 1 year and no therapeutic procedure has proved satisfactory.

"Four patients survived 3 or more years. Two patients had received radiation therapy only and 2 patients had undergone interscapulothoracic amputation.

"It is suggested that irradiation be the initial therapy since lymphangiosarcoma is radiosensitive in certain pa-

tients. Interscapulothoracic amputation can be considered if no favorable response is obtained within a relatively short time after institution of a radiation therapy."

By Julian B. Herrmann and John G. Gruhn

Surgery Gynecology & Obstetrics, Vol. 105, No. 6, Dec., 1957, P. 673

Hiatus Hernia

"1. A study is recorded of 200 cases discovered during the routine investigation of dyspepsia. One hiatus hernia was discovered in every 30 barium meals (3.3 per cent.), compared with one in 10 for gastric and one in 2.6 for duodenal ulcers.

"2. The hernias have been classified as sliding (145), rolling (35), and combined (20). The incidence of the condition gave a female:male ratio of 4:1, the commonest lesion being the sliding in women and the rarest the rolling in men.

"3. Apart from a small group of sliding hernias occurring in women during pregnancy, it is essentially a disorder of middle or later life, the majority of patients seeking advice in the fifth to seventh decades.

"4. With sliding hiatus hernia the main complaints were epigastric pain, heartburn, regurgitation, vomiting, flatulence, haematemesis, and dysphagia. Gastro-oesophageal regurgitation was demonstrated in 93 per cent of cases, and most of the symptoms with this type of hernia were oesophageal, arising as a direct result of incompetence of the cardia. Obesity was noticeable in 66 per cent, and pregnancy present in 9 per cent, of this group of patients.

"5. With rolling hernia the main feature was anaemia. Iron-deficiency anaemia was found in 55 per cent of cases. It seemed to be due to loss of blood, and responded to oral iron, a treatment which is continued indefinitely. Kyphoscoliosis was present in 60 per cent, and borborygmi were audible over the sternum in half of the patients. Symptoms were vague, being mainly those of flatulence or related to anaemia.

"6. Combined hernia presented a composite picture and symptomatalogy.

"7. The view that the majority of hiatus hernias are symptomless was not supported in this series. In 97 per cent of the patients the hernia was the main source of dyspepsia, but the appearance of symptoms was occasionally related to an underlying gastric neoplasm or abdominal tumour.

"8. Aetiological factors in sliding hiatus hernia seem to be a congenital predisposition or hiatal weakness, degenerative changes, and increased intra-abdominal pressure due to pregnancy, tumour, or obesity. In rolling hernia intra-abdominal pressure does not appear to be such an important factor, and the herniation depends on the presence of a preformed peritoneal sac and possibly diaphragmatic deformation by kyphoscoliosis.

"9. The radiological examination of such cases is briefly outlined.

"10. The complications met in this series were haematemesis, melaena, anaemia, and oesophageal stricture. There were no instances of strangulation or perforation.

"11. Medical measures, including weight reduction, small meals, the use of posture, and the administration of antacids and iron where appropriate, were generally successful. Some form of surgical treatment was resorted to in 33 cases. In 23 of these the hiatus was

repaired by the transthoracic route; symptoms of reflux oesophagitis recurred after six months' freedom in five patients (21 per cent). Of the remaining 10 patients, partial gastrectomy was performed in four, phrenic crush in one, resection of an oesophageal stricture in three, and dilatation of a stricture in a further two."

By Vincent Edmunds
The Quarterly Journal of Medicine
Vol. XXVI, No. 104, Oct., 1957.
Pp. 463-64

New Orleans Graduate Medical Assembly

The New Orleans Graduate Medical Assembly which is in its twenty-first year, met under the presidency of Dr. Charles L. Brown, in the Roosevelt Hotel in the first week of March. More than sixteen hundred physicians registered in it. Full attendance at the sessions of the Assembly this year was rewarded by thirty hours of full credit by the American Academy of General Practice. The program which covered the fields of Internal Medicine, General Surgery, Obstetrics and Gynecology, Pediatrics, Psychiatry, Ophthalmology, Otolaryngology, Dermatology, Urology, and Orthopedic Surgery was interesting, instructive and practical. The officers and members of the Assembly are a friendly group, the meetings were well organized, and the Roosevelt Hotel provided excellent facilities. Indeed, as the Hotel had Elvis Presley as a guest during this week, those who attended the Assembly had some very interesting clinical demonstrations of teenagers' hysteria. New Orleans is a fascinating city, and the food served in its French restaurants, such as Antoine's, Galatoire, or Arnaud's in the *Vieux Carre* is out of this world. The doughnuts (Baptist cakes) and coffee at the Morning Call should be sampled at least once, when anyone is in New Orleans. The Assembly is a meeting which your wife will especially enjoy, so bring her with you. I would suggest leaving the children at home. You can rest assured that if you spend this March week in New Orleans, you will find a stimulating intellectual atmosphere at the Assembly, and the environment will be pleasant socially, and even restful after a hard winter of practice.

I heard most of the papers presented at the Assembly and jotted down the following notes:

Dr. James M. Baty, Professor of Pediatrics at Tufts University Medical School in Boston presented some interesting data on psychogenic abdominal pain in children. In his group this occurred in children between the ages of four and eight years, whose parents were apprehensive, fearful, insecure, or "painful." The children themselves do not have personality problems but are introspective, passive, fearful and anxious little worriers. The pain generally begins in the epigastrium but may shift to either upper quadrant. It is important to recognize the psychogenic basis of such pain, because then by conferences with the child and its parents, a cure may be affected.

Dr. Charles A. Flood of New York City discussed the "Medical Management of Peptic Ulcer." He stated that the prolonged use of the glucocorticoids in certain diseases had resulted in the occurrence of peptic ulceration in about a quarter of the patients so treated. It was his opinion that patients in whom an antral ulcer is demonstrated, should be explored very promptly because a

high percentage of such ulcers are malignant, and by early surgical therapy a number of these cancers can be cured. With other types of peptic ulcers Dr. Flood recommended that the usual regime of rest, reassurement, the administration of antacids, parasympatholytic drugs, and frequent feedings be instituted, even though it is not definite from a scientific point of view that such a regimen hastens healing. Commonly, under this type of therapy the majority of patients will have their ulcer heal in eight weeks. When this takes place, the strict dietary controls should be relaxed, and the patient's diet be brought as close to normal as possible. Persistent pain is a bad omen and generally means that an operation will be necessary. Hemorrhage, on the other hand is not necessarily an indication for operation, and Dr. Flood stated that for most patients, he would not recommend surgery after one hemorrhage, but he would do so if they had a second hemorrhage.

Dr. Bayard T. Horton of the Mayo Clinic talked on temporal arteritis (the disease which he first described twenty-seven years ago). He pointed out that it was a granulomatous disease of the carotid arterial tree, in which the symptoms and signs were dependent on the extent of involvement (occlusion) of the arteries. His series now numbers one hundred and seventeen; fifty-four males, sixty-three females. Their average age when first seen was about sixty-nine years. Hence, temporal arteritis is a disease of older people. The headache which is "shooting" in type, is worse at night, or when the patient lies down. Intermittent claudication of the jaw muscles may occur. The temporal arteries become swollen and exquisitely tender. The important complication is blindness of varying degrees in one or both eyes. This results from the occlusion of the central artery of the retina by the pathological process. Blindness can be prevented by recognizing the disease early, and treating it with one of the glucocorticoids.

Dr. Horton also discussed "Histaminic Cephalagia" in a subsequent presentation. He stated that by the time forty percent of the patients suffering from this disease reached the Mayo Clinic, they had had one or more operations for relief of the pain. Among these operations were those for sinusitis, deviated nasal septa, ligation of the temporal artery, and injection or cutting of the fifth nerve. This type of headache occurs chiefly at night. Several attacks may occur in one night. There is often residual redness in the area of the pain after the attack is over, and tearing of the eye, and rhinorrhea on the affected side are seen during the attack. The pain is very severe. The histamine provocative test, i.e., producing an attack by the injection of histamine is an important diagnostic test. Cure results from desensitization to histamine.

Captain George N. Raines, MC, USN detailed the very interesting history of a woman suffering from asthma and an acute depression, who committed suicide by physiologic methods (eliminated the functioning of her respiratory mechanism) during a psychiatric interview. Dr. Raines stated that this occurs more frequently than many physicians realize, especially in patients with very, very acute depressions. In the particular instance under discussion, a review of the interview, showed that a few minutes before death, the patient expressed a very strong desire to talk about one phase of her emotional problem but was

deterred from doing so by the interviewing psychiatrist. Dr. Raines pointed out how important it is to let a patient talk when he brings up a question and is ready to discuss it. The preconceived ideas of the psychiatrist should not be permitted to interfere at this point. However, he thought that it was not a good plan to utilize "uncovering" psychotherapy in psychosomatic disease when the somatic condition is acute. Captain Raines further stated that we really don't know what the true suicide rate is in this country. He cited those suicides who drive cars into obstacles, drink themselves to death, etc. He said that the physician should not think that suicide and depression were synonymous terms, as suicides occur in the entire range of personality types. However, ninety-five percent of suicidal patients have a "death trend" the result of their thinking, or dwelling on thinking, about a near and dear relative, or friend, who suffered a tragic death, when the patient was an adolescent.

Later in the program Dr. Raines discussed the interesting problem of the "male menopause." He stated it would probably be better to call it the male climacteric. It makes its appearance in men aged forty-five to fifty-five, and is characterized by a subtle change in the metabolic processes, a burning out of the fire, ideas that one is not attaining the goals which one has set for himself, a fear of dependency on other persons, a worry about prestige values, especially in the eyes of other people. It occurs most commonly in aggressive, hard driving, compulsive people. While in reverse, these conflicts are similar to those which may assail the adolescent child. While mood changes may not develop early, when they do, they consist of loss of interest in life pursuits, an inability to do things which were once easily accomplished, and easy weeping. These mood changes have a diurnal variation, with the mood being lowest in the morning. There is early awakening, the patient can't get back to sleep and becomes fearful, tense, and anxious. This is the time they kill themselves. Insomnia of recent origin in middle years is very significant. Early morning fatigue, neuromuscular complaints of hypomotility of the gastrointestinal tract, constipation, dry skin, and a mood in which the world is seen only through dark glasses and is going to the dogs, are very important symptoms and signs. One has to listen long and carefully to these patients' complaints. Then one does a very careful physical examination and carries out all needed laboratory tests before opening the therapeutic interview with the patient. Assurance and reassurance are very important in the treatment of the male patient in his climacteric. Drugs should not be given until after the therapeutic interview or interviews are essentially completed. Androgens are of little use. Dexedrine is of some value but patients seem to develop a tolerance to it.

Dr. Frank D. Lathrop of the Lahey Clinic in Boston presented a very practical paper dealing with vertigo, the commonest manifestation of which is dizziness which indicates a disturbance of equilibrium. Dizziness may be constant or intermittent. True whirling vertigo with its constant sensation of movement or waviness is caused by labyrinthitis which may be serous, suppurative, or toxic in type, or due to a vascular disturbance such as a thrombosis, an acoustic neuroma, or a fracture through the labyrinth. Paroxysmal

dizziness may be postural in type with nystagmus; it may occur when the patient has hypertension, hypotension, leukemia or polycythemia, with Meniere's Disease, migraine, or emotional states. As Dr. Lathrop pointed out, in Meniere's Disease, the patient has sudden paroxysmal attacks of vertigo, lasting from ten or fifteen minutes to several hours. It takes time to recover from these attacks, and perceptive deafness in one or both ears will be noticed. Also the patient hears sounds in the ear. Between attacks while tinnitus and deafness may be present, vertigo is absent.

As this is a very disagreeable disease, Dr. Lathrop counselled physicians to be kind to the patients who suffer from it. They really need someone to help them. Treatment consists of the patient accepting a low salt diet (200 mgms. of sodium or less), and of producing a mild metabolic acidosis by the administration of ammonium chloride. If this fails, surgical therapy is indicated. Migraine as was pointed out is associated with dizziness before, during or after the attack, or all three. It was stated that dizziness may occur in patients having imbalance of their ocular muscles or in glaucoma. Patients may also describe their feelings as being those of "dizziness" in tabes dorsalis, disseminated sclerosis, multiple sclerosis, and in conditions characterized by cerebellar ataxia.

Dr. Ormund S. Culp of the Mayo Clinic presented practical material on the "Management of Acute Urinary Suppression." As he pointed out ischemia with its accompanying anoxia produces urinary suppression. He quoted Haldane's remark to the effect that "Anoxia not only stops the machinery, it may wreck it." Thus the severity of the ischemia determines the outcome of therapy. When faced with a patient suffering from acute urinary suppression, the physician should be concerned with the maintenance of normal hydration, the regulation of body electrolytes, a decrease in the production of waste products, and methods for the removal of waste products. The physician must not let the patient have too much fluid. *A liter a day is sufficient, if fever, diarrhoea, or vomiting are not present.* Carbonated beverages are excellent. Fruit juices should not be given because of their potassium content. Ammonium chloride may be used to keep chlorides at normal levels, and if acidosis occurs, sodium bicarbonate, or one sixth molar lactate solution may be administered. A small volume, high caloric carbohydrate diet should be used. Proteins should be avoided. In patients having severe effects, extra corporeal dialysis ("Artificial Kidney") should be started *early* in the suppression. Such therapy of course can only be carried out by a team trained in the techniques of extra corporeal dialysis.

Medical Ethics and Etiquette

Section 3. A physician should practice a method of healing founded on a scientific basis; he should not voluntarily associate professionally with anyone who violates this principle.

PRINCIPLES OF MEDICAL ETHICS
J.A.M.A. 164:1484 (July 27), 1957

The meaning and background of this principle should be quite clear. Physicians simply *MUST NOT* consort professionally (or for that matter socially) with cultists or quacks, even though the quacks, as some do, hold the degree of Doctor of Medicine. All quacks are not necessarily from cultist backgrounds; some are graduates of reputable, and even famous medical schools. Cultists generally are members of sectarian systems of medicine which are not based on scientific demonstration and experience, but rather on the dogma, tenets or principles derived from the authority of the promulgator of the particular cult or sect.

However, we must all realize that the so-called "cults" may through the years evolve to a point at which their dogma becomes essentially that of a major portion of the profession, and then they become indistinguishable in their methodology and practice from the rest of the recognized medical profession. This is what has happened over the years to the practice of homeopathy. Even at the turn of the century, the homeopaths were in the outer pale in the minds of the allopaths. Now this split has essentially disappeared. It may come as a surprise to some readers to know that homeopathy ever existed, and that late in the nineteenth century the status of homeopathic physicians was the cause of a continuous battle between the Medical Society of the State of New York and the American Medical Association. The Medical Society wanted everyone legally entitled to practice in New York State to be considered ethical physicians.

The most recent problem of this type which has occupied the minds of—shall I say "organized medicine"?—in the country has been the status of osteopathy, and of the osteopathic physician. In a number of our States, the osteopathic physician has to qualify for a license to practice by taking the same state board examinations as doctors of medicine. This means that he must have essentially the same background

in the basic and clinical sciences as has a graduate of a reputable medical school. Furthermore, laws both statutory and administrative exist, in certain States, which permit osteopathic physicians to enroll in any postgraduate courses given by faculties of state university medical schools. Thus, the medical-faculty member may have, due to this circumstance which is beyond his control, osteopathic physicians in his postgraduate courses, and thus will be consorting with them "professionally." I believe this is why the word "voluntarily" has been used in describing the type of association which is forbidden. Furthermore, it appears from an opinion of the Judicial Council, that a graduate of an osteopathic school who takes and passes the same type of licensing examination that is required in a State for a graduate of a regular school, and who does not practice or claim to practice sectarian medicine, and who conforms to the Principles of Ethics of the American Medical Association, should not be classed as a cultist. However, it must be made clear that all *voluntary* association with professing osteopaths is considered unethical under current Principles of Ethics. The same is true of *voluntary* association with optometrists, but not with chiropodists, as chiropody is not considered a cult practice, but is an auxiliary practice in a limited field in which doctors of medicine are not too interested.

For several years there has been a move under way in the House of Delegates of the American Medical Association to recognize the legal and practical implication of osteopathy in the several States which require osteopaths to pass the regular licensing examinations, and to bring certain groups of osteopathic physicians into non-sectarian standing. To date, these proposals have been defeated, but a few years ago, when the question was before the House of Delegates, a shift of the votes of a relatively small number of delegates to the other side would have made victory possible for those who favor closer relations in certain areas with osteopathic physicians. It is your Editor's opinion that within a generation, osteopathic physicians, in a number of areas, will have definite affiliations with, or may even be absorbed into, medical societies. In this respect, one must remember that the House of Delegates is more flexible in its attitude toward various problems which confront it, than most people realize. It is considered good, clean fun by many to make the House a "whipping boy" when they are trying to get after what is called "Organized Medicine".

In closing, I would like to point out one type of professional relationship with a cultist which is voluntary in nature and permissible under our code of ethics. That is when he or his family are ill and seek your professional care. Fully realizing that one can choose who will be his patients, in general it appears that physicians have made a practice of treating cultists or their families when they come asking for medical care. This relationship would seem to be permissible under Section 1 of our Code of Ethics.

Catheterization of the Male Urethra

Catheterization is a necessary office procedure for a large variety of diseases and diagnostic procedures; it is also one of the operative procedures where the slightest disregard of a step in the technique might cause grave damage.

Anatomy The understanding of the anatomy of the urethra is the key to the technique of catheterization.

The urethra consists of three parts:

1. pars prostatica, situated in the pelvis.
2. pars membranosa, situated in the perineum.
3. pars cavernosa, situated in the penis.

The upward directed concave curvature of the subpubic curvature is fixed; the downward directed concave curvature of the prepubic curvature can be straightened out by lifting the penis. The pars pendulosa of the penis is freely movable, the pars membranosa is firmly fixed, the other parts are slightly movable. The lumen at the external and internal orifices and at the pars membranosa is narrowed. The lumen at the pars prostatica, the fossa bulbi, and the fossa navicularis is wider. Fig. 1.

Technique Catheterization should be attempted first with a straight soft Nélaton catheter; if this is unsuccessful then with a soft catheter with a Mercier curve; if this is also unsuccessful the rigid catheter should be tried and finally catheterization with a woven silk catheter should be attempted. The size of the catheter should be 20-22 Charrière; If this appears too thick then a smaller caliber should be tried. Fig. 2.

The patient is placed on his back, the buttocks are elevated by a hard cushion, the legs are spread apart and are somewhat externally rotated, the knees are slightly bent. A urinal or kidney basin is placed between the thighs of the

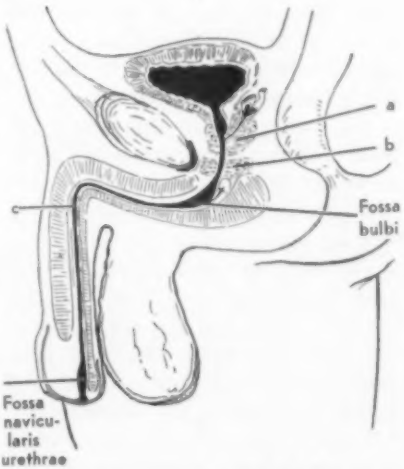


Fig. 1. Median section of the genito-urinary tract showing the shape and dimension of the lumen of the urethra, the passage way of the catheter.
a. pars prostatica. b. pars membranosa.
c. pars cavernosa.

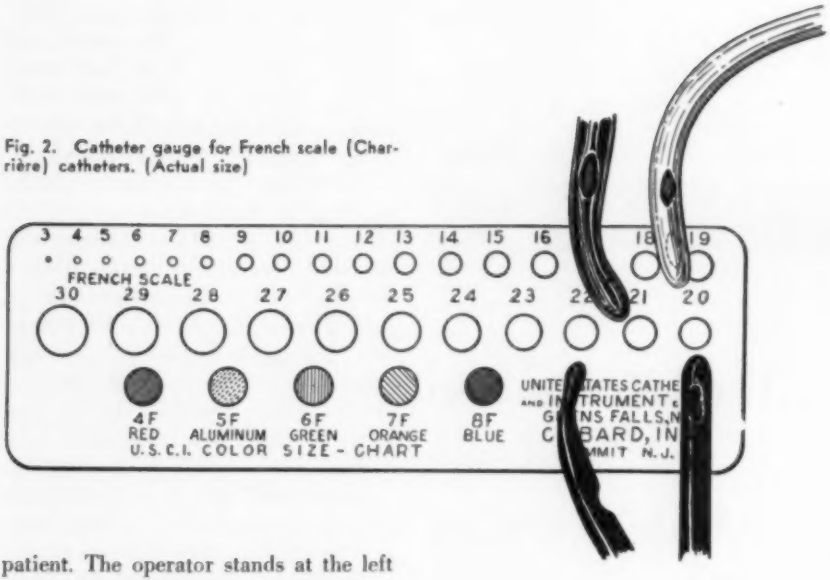


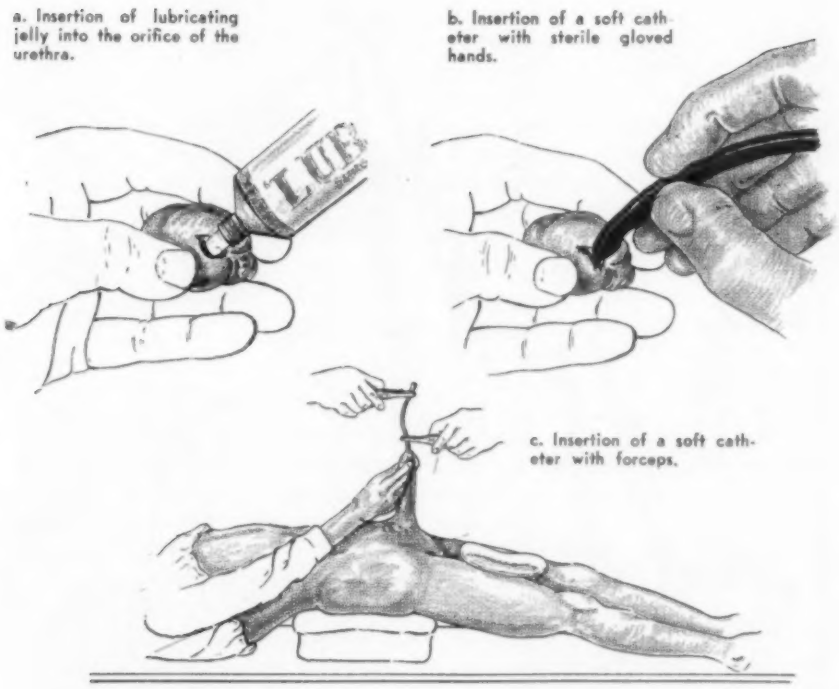
Fig. 2. Catheter gauge for French scale (Charrière) catheters. (Actual size)

patient. The operator stands at the left side of the patient.

Catheterization with Rubber Catheter The orifice of the urethra is cleansed with a mild disinfecting solution. The left hand of the operator grasps the penis at the coronary sulcus and elevates it by a slight traction so that it becomes vertical to the long axis of the body. Slight pressure upon the glans with the thumb and index finger causes the orifice to gape. A few drops of a sterile lubricating jelly are inserted into the gaping orifice. Fig. 3a.

The right hand which is covered with a sterile glove grasps the sterile catheter, upon which has also been placed a few drops of a sterile lubricating jelly, close (about 1½ inches) to its tip and pushes this length of the catheter slowly into the urethra. Fig. 3b. Immediately at its insertion the catheter may encounter a slight resistance caused by the fold of the mucosa at the upper wall of the urethra (Guérin's fold), or by the pouch of the fossa navicularis at the lower wall of the urethra. These obstacles can be easily overcome by a slight twisting of the catheter. The further insertion of the catheter is accomplished by successive grasping of the catheter a similar short distance above the urethra and pushing it into the urethra. Make sure the parts of the catheter to be inserted remain sterile and do not lie on contaminated areas during first part of insertion. This same procedure is repeated until the catheter reaches the bladder. The catheter usually glides easily through the cavernous part of the urethra up to the bulbus. At the bulbus an existing pouch of the lower wall of the urethra might offer a resistance to the further gliding of the catheter, as the catheter might push against the blind ending of the pouch instead of entering the narrowed membranous part. If this occurs the obstacle can be overcome by pulling the penis with more force, by retracting the catheter

Fig. 3. Method of insertion of a soft catheter.



slightly and by slightly lowering the penis and catheter; then the catheter can be pushed forward by short shoving motions. The patient is requested to take a deep breath to avoid any reflex contraction of the perineal musculature. The appearance of the urine indicates the entrance of the catheter into the bladder.

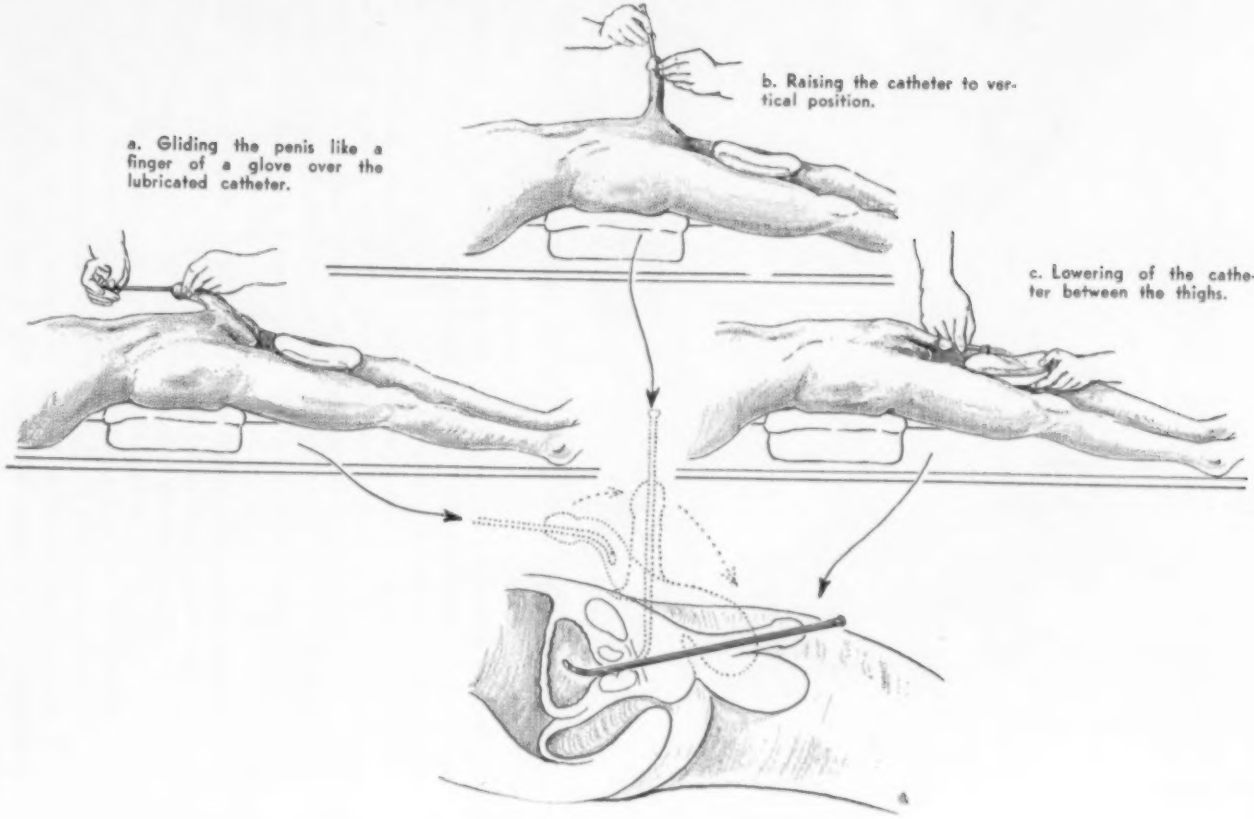
If no sterile gloves are available one can use two sterile anatomical forceps (ribbed forceps) to insert the catheter with unsterile hands. In this case either the patient or an assistant holds the penis in the required position. Fig. 3c.

Catheterization with Rigid Catheters Catheterization with rigid (metal) catheters is accomplished in three stages.

1. The right hand of the operator holds the metal catheter at its distal end parallel to the long axis of the patient's body and in midline of the patient's abdomen, so that the curve of the catheter is directed upward and the tip downward. The left hand of the operator grasps the penis at the coronal sulcus and glides the penis over the lubricated catheter as far as it is possible without moving the catheter, which is held in an unchanged position. Fig. 4a.

2. At this point the catheter is past the cavernous part of the urethra and lies at the bulbus urethrae. By very gen-

Fig. 4. The three stages of insertion of a rigid catheter.



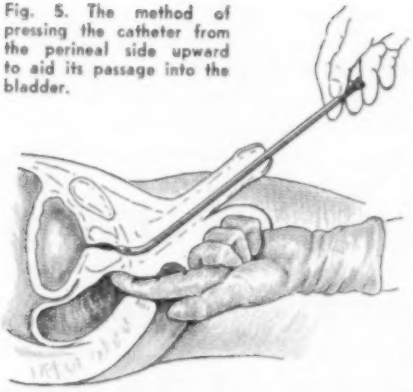


Fig. 5. The method of pressing the catheter from the perineal side upward to aid its passage into the bladder.

tle manipulation the catheter is raised slowly to vertical position but not deviating from its position in the median line. The tip of the catheter is now glided through the membranous part of the urethra. Fig. 4b.

3. The tip of the catheter is now at the prostatic urethra and by gently pressing with its tip against the anterior wall of the urethra the catheter is slowly lowered between the thighs until its axis is parallel with the long axis of the patient's body, with its end pointing distally towards the feet of the patient. By this manipulation the catheter is passed through the prostatic urethra and enters the bladder and allows the urine to flow out. Fig. 4c.

The insertion of a metal catheter is accomplished by lever action alone and never by forcible pushing the instrument into the urethra.

The most frequent difficulty encountered in passing a metal catheter occurs when its tip catches in the pouch of the bulbous urethra just as the entrance of the narrow and inelastic membranous urethra. This difficulty can be overcome by retracting the catheter slightly and then proceeding again with slight lever action. One can aid the passing of the catheter at this point by pressing its tip from the perineal side upward with the index finger of the left hand. Fig. 5.

The removal of the catheter is accomplished by reversing the phases of the procedure of insertion.

Semisoft woven catheters are inserted in a similar way as rigid catheters.

Rubber and woven catheters should be given special care to avoid deterioration, which makes their use unsafe. The following methods will preserve them for safe use for a prolonged period of time.

Sterilization 1. Autoclaving for 10 minutes at 250 F. with 15 pounds pressure is the best method.

2. Boiling for 5-10 minutes is not an efficient method and should be used only if other methods are unavailable.

3. Cold sterilization should be with solutions which contain no phenols, cresols, or other rubber solvents.

Catheters deteriorate when oversterilized and might crack if bent during sterilization.

Catheters should be kept in a cool dark place away from electrical equipment, fluorescent lights and other devices which might emit ozone. Contact with oils, copper or manganese should be avoided, and one should not permit hot catheters to touch any metal.



MEDICAL JURISPRUDENCE

Physician's Liability for Malpractice or Negligence of Another

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The physician must select his assistants with the utmost care for he may be liable for their careless acts on the legal theory of a principal's liability for the deeds of his agent, or the responsibility of the master for the acts of his servant *(respondeat superior)*. Physicians have been held liable for the acts of assistants, employees, servants, nurses, internes, orderlies, attendants and partners. The fact that the employee is also a physician is immaterial. Consulting physicians and substituted or recommended physicians are ordinarily not considered agents of the recommending physician and liability usually does not attach to him.

The Surgeon in the Operating Room Plaintiff had been placed on his back on the operating table and rendered unconscious by anesthesia. The orderly was at the foot of the table and the anesthesiologist was at the patient's head checking and recording respiration, pulse, etc. Defendant surgeon entered the room and ordered plaintiff to be placed on his side and strapped. Orderly left the room for a strap. Anesthesiologist was busy with her chart. Surgeon turned his back for a moment and plaintiff fell off the table and was severely injured. The jury found the operating surgeon negligent in ordering the attendant to do anything which might take him away from the physical person of the patient without first assuring himself that someone else was on hand to attend and hold the person.

The court overruled the surgeon's contention that his responsibility began at the start of the operation. It begins when he assumes supervision and direction in the operating room.[1] As an Oklahoma court put it:

"The patient is helpless under the

influence of anesthetic and absolutely at the mercy of surgeons performing the operation, and they are charged with the duty to see that no preventable injury results to their patient. Under the modern science of surgery a surgical operation, with modern hospital appointments, is a complex enterprise. Necessarily, the various agencies that enter into it must be performed by different individuals, under the active supervision and direction of the operating surgeons in charge. If the operating surgeons were not made liable for the negligent performance of the duties of those working under them, the law in a large measure would fail in affording a means of redress for preventable injuries sustained from surgical operations."[2]

While an operation is in progress a nurse or orderly employed by the hospital or patient normally become the temporary servants of the surgeon and he becomes responsible for their acts.[3] Surgeon was liable for the negligence of an assisting nurse who left a sponge inside the patient.[4] While there are decisions to the contrary as to the liability of the operating surgeon for the negligence of the assisting nurse, courts which hold the surgeon liable do so to pinpoint responsibility during the intricacies of an operation.

The activities of a nurse in preliminarily cleaning the operating room, placing clean sheets on the operating table, preparing clean gowns and gloves, sterilizing the instruments to be used in the operation and seeing that they are available for that purpose, making ready the sterile drapes, placing the patient on the operating table, are administerial acts performed by the nurse as an employee of the hospital, and the nurse is not an employee of the surgeon.[5]

A 1956 Iowa case held similarly that the acts of the hospital employees in preping and draping patient for surgery were not attributable to the operating surgeon.[6]

Internes, Nurses and Other Assistants Apart from the perhaps arbitrary doctrine of responsibility the courts have placed upon the operating surgeon, the question of responsibility often rests on whether the assistant is an employee or servant of the physician or the hospital or patient. Giving instructions to the nurse of a patient does not automatically make her the physician's servant. After the operation the physician ordered patient's attendant to keep her warm by placing hot irons in the bed. The attendant's negligence in burning patient was not attributable to the physician.[7]

It is often a question of fact for the jury whether nurses, attendants or internes employed by a hospital are under the temporary control of the physician so as to make him liable for their acts. In a 1950 Pennsylvania case the interne negligently removed the stitches after an operation. The court held this was part of the post-operative treatment. These services were performed by the hospital. The operating surgeon did not supervise, was not present, and was not liable.[8] Yet in an earlier case the same court held that the obstetrician was liable for the interne's negligent administration of silver nitrate to the eyes of the infant delivered by the obstetrician. The interne was under the control and orders of the surgeon, and the jury was justified in finding that a temporary master-servant relationship existed.[9] It will be noted that the acts took place in the operating room in the latter case,

while the former case was an instant of post-operative treatment.

Normally, if the physician has no control over the attendants or employees of the hospital, and the hospital attendants or employees are discharging their own routine hospital duties the physician is not liable for their negligent acts. Plaintiff was diagnosed by defendant neurologists as a schizophrenia with paranoid tendencies which consisted of manifest persecutory ideas. While in an open ward patient jumped out of the window. *Held:* it was the duty of the hospital nurses to keep plaintiff confined to her room. The liability was the hospital's, not the physicians'.[10]



Acts of Specialists:

X-Ray Treatments and Anesthesia

A physician ordinarily is not responsible for the conduct of another physician whom he employs to act independently. The surgeon engaged an anesthesiologist, a physician, to administer a special anesthetic preparatory to the operation. The surgeon was not liable for the act of the anesthesiologist in breaking the needle.[11]

A surgeon was instructed by patient that she did not want a spinal block type anesthesia. He noted this on patient's chart. The anesthetist, a physician also, gave a spinal block contrary to patient's instructions. While the anesthetist was liable for injuries on grounds of assault (no consent having been given for the procedure used, and no negligence proved) the surgeon was not liable for the actions of the anesthetist. The surgeon had done all he could reasonably be expected to do and was obliged to do. He was not an insurer, nor was the anesthetist his agent.[12]

But where a person who is not a physician administers anesthesia then the operating surgeon may be charged with liability. The surgeon arranged for a hospital nurse to administer anesthesia to a child prior to a tonsillectomy. An overdose was given and the patient died. The court held the surgeon was in charge of the nurse during the operation and responsible for her acts.[13]

The anesthesiologist conversely is not chargeable with the negligence of the operating surgeon.[14]

In cases of X-ray injury plaintiff often sues the physician recommending X-ray treatment although he himself does not give the treatment. The nub of the case depends on the degree of control exercised by the alleged master. If the X-ray technician can be shown to be an employee of the physician liability will attach to the physician. A recent Michigan case held that a chiropractor was liable for X-ray treatments given negligently by his employee even

though she exceeded her authority in giving the treatments.[15]

But where an independent physician is recommended for the actual treatments the recommending physician ordinarily is not liable. So long as the physician or specialist is chosen with care and each doctor has been employed to perform his separate work independently of the other the negligence of one is not carried over to the other.

Joint Liability There are instances, of course, where physicians may diagnose or treat a case jointly. In such case they may be jointly liable for the negligent acts of the other.

Patient engaged defendant X to treat her broken hip. Defendant X called in defendant Y. Both defendants diagnosed and treated patient, often together. The court held both were liable for erroneous diagnosis and treatment and failure to take x-rays. Defendant X argued she withdrew from the case early in the treatment. The court held she could not relieve herself from responsibility in a case simply by staying away without notice to patient.[16]

A family physician would ordinarily not be liable for the negligence of the operating surgeon whom he recommended.[17] But when the family physician participates in the diagnosis of the specialist and continues in active charge of the case he can be held jointly liable.[18] Division of service between physicians means division of responsibility and liability.

Defendant, a resident surgeon of a hospital, was assigned by the hospital authorities to assist a surgeon in an operation. The resident performed the operation while the principal surgeon assisted and addressed an audience of students. Both were charged with malpractice. The resident claimed that he was under the direction and control of the principal surgeon at all times and that it was his duty to follow the principal surgeon's instructions and directions at all times during the course of the operation. *Held:* The fact that the resident performed the operation with or without assistance or direction made him a co-actor and jointly liable with the principal surgeon for any malpractice occurring during the course of the operation.[19] A joint tortfeasor is liable for the entire amount of the judgment against all the joint tortfeasors. So if a judgment is won against A, B and C, and B leaves the country and C is without resources and judgment proof, Physician A can be made to pay the entire amount.

Where physicians act jointly in diagnosing or treating a case they are liable for each other's negligence not only in commission but in omission as well, i.e., for what they saw or should have seen of the other's acts.[20]

Acts of Partners Partners in the practice of medicine are all liable for the acts of each other and their assistants.

Defendant partners were liable for the negligence of their employee in failing to use proper care in the application of diathermic treatment to plaintiff.[21]

Defendant physicians were sued for malpractice by Mrs. Winkler for acts performed in 1952. In 1953 they formed a partnership with other members of their profession. At no time after the partnership was formed did defendants treat Mrs. Winkler. *Held:* The partnership was not liable for the acts of the individuals of which it was composed prior to its formation.[22]

In the same case a physician who employed a number of doctors to work in his clinic was sued for failing to take due care in hiring competent doctors to work for him. The Court held that a judgment against the physician-employer could not be sustained if the jury did not find any of the physician-employers guilty of negligent acts.[23]

Acts of Substitutes or Recommended Physicians A physician told his patient he would be away for two or three weeks and during his absence Dr. X would attend to his cases. *Held:* The recommending physician was not liable for the acts of his substitute.[24]

The same rule holds true for recommended specialists. The physician is bound to use ordinary care in the selection of substitutes or in recommending specialists.

Acts of Pharmacists The physician telephoned the druggist and ordered "one ounce of mild chloride of mercury." The druggist sent "bichloride of mercury" and patient's scalp was burned. The physician was liable to patient.[25]

Malpractice Insurance Physician's insurance policy expressly omitted from coverage bodily injury "caused by the assured or any assistant of the assured . . . while engaged in . . . any unlawful act . . . or the violation of any law or ordinance." Physician hired an unlicensed assistant whose negligent acts were the basis of a malpractice suit. *Held:* The insurance company was not liable under the policy.[26]

The physician was insured against malpractice by any assistant in his employ "while acting under the assured's instructions." He employed two assistants, both physicians. One of his assistants responded to a call, made a diagnosis and treated the injuries. At no time did the insured physician personally direct the assistant with reference to the treatment of the injured man



or have personal knowledge of his particular case. The physician urged that his assistant acted under previous general directions and within the scope of his employment. *Held:* The insurance company was not liable under the policy. The Court pointed out that the insurer did not undertake to answer for the mistakes of any or all subordinates unknown to the company. It specifically eliminated this hazard by stipulating for instructions or supervision of the assured.[7]

Liability of Hospitals Hospital liability for the acts of its employees can be discussed under three separate categories legally: 1) liability of the government hospital; 2) the charitable institution; 3) the private hospital.

Federal, state, county and city hospitals are liable for acts of their employees only by legislative enactment. The government cannot be sued without its consent. In most cases legislative acts have been passed permitting suit, e.g., the Federal Tort Claims Act.

A soldier on leave was injured in an auto accident. Thereafter he was negligently treated in an army hospital by army physicians and surgeons. *Held:* The U. S. was not liable under the Federal Tort Claims Act for malpractice of the army surgeon or physicians. Plaintiff's injury was service connected, incidental to military service.[28] The opposite result was had in *U.S. v. Brown*.[29] In that case plaintiff had been discharged from the army and was negligently treated at a V.A. hospital for a knee injury sustained while in service.

There is some difference of opinion on the liability of city hospitals which also take in paying patients. Some jurisdictions put them in the category of state institutions; others treat them like private hospitals; still other jurisdictions treat them like private hospitals only in respect to the paying patients.

The physician who is employed by a municipal or county hospital in New York is still personally liable for his acts even though he is not paid. The municipalities, however, assume the liability for his negligent acts by legislative mandate. The municipality defends the suit and pays the damages.[30]

Charitable institutions in the past have escaped liability for malpractice of nurses or physicians acting in their professional capacity on the theory that they were independent contractors, even though employed by the hospital. Liability of charitable institutions was limited to ministerial or administrative functions of the hospital staff. Courts were hard put to distinguish between professional and ministerial acts and a welter of confusion arose. For example, placing an improperly capped hot water bottle on a patient's body was termed an administrative act for which the hospital was liable,[31] while keeping a hot water bottle too long on a patient's body was a medical act for which no hospital liability incurred.[32] Administering blood by means of a transfusion to the wrong patient: administrative[33]; administering the wrong blood to the right patient: medical.[34]

To end the confusion more states are imposing liability on charitable institutions in the same way liability is placed on private hospitals. Ten months ago New York joined these states and completely reversed its stand on non-liability of charitable hospitals for medical acts which had been the New York law since 1914. The plaintiff was severely burned during an operation performed at the hospital by her own physician for

correction of a fissure of the anus. She had been made ready for the operation, before the surgeon's appearance, by the hospital anesthetist and by two nurses also in the employ of the hospital. An inflammable antiseptic, tincture of zephiran, was used by the anesthetist preparatory to and after the induction of the spinal anesthesia. The nurses' carelessness in not changing the sheets caused a fire when the surgeon used a heated electric cautery, and patient's back was burned.

The Court of Appeals held the hospital liable on the basis of *respondeat superior*. "Hospitals should . . . shoulder the responsibility borne by everyone else,"[35] said the Court. The test should be: Was the negligent act committed by an employee within the scope of his employment?

A private hospital, whether a corporation or a partnership, is liable for the negligent acts of its employees or agents. In many cases a question arises whether a hospital which is a corporation can be liable for medical acts of its staff physicians. Physicians are said to be independent contractors who alone are responsible for the exercise of professional skill and judgment; they are not under the control of the hospital. Furthermore, in many states a corporation can not practice medicine. So often the hospital corporation escapes liability for the negligent acts of physicians it furnishes. They have a duty only to exercise good judgment in the selection of physicians. But again, as with charitable institutions, the realities of the situation are being slowly recognized. So the negligence of internes, who are after all, doctors, are attributable to the hospital.[36] And cases have held that where a private hospital contracts to furnish medical or surgical services apart from routine ones it will be liable for the negligence of the physician it furnishes.[37] From the point of view of the patient in such cases the interne or physician is not an independent contractor but an employee or agent of the hospital.[38]

Summary

1. The operating surgeon is responsible for all those working under him. He is in charge of the operating room and is liable for the negligent acts of those persons under his control: nurses, internes, assistants and at times even orderlies. Employees of the hospital under the surgeon's command become his "loaned" servants for the duration of the operation.

2. The responsibility of the operating surgeon begins when he assumes supervision and direction in the operating room; it is not postponed until the actual beginning of the operation.

3. The surgeon is not liable for the acts of the hospital employees during post-operative care even though he gives special orders for the care of the patient. Employees are performing their routine functions.

4. The surgeon is not liable for the preliminary activities of the nurse preparing the operating room, or preping and draping the patient for surgery, or the scrub nurse.

5. The negligent act of an interne in removing the stitches after an operation has been held to be part of the post-operative treatment for which a surgeon who was not present and did

not supervise was not liable.

6. The person in control of the attendants by and large is the one who incurs liability.

7. The surgeon is not responsible for the acts of the physician anesthetist, and vice-versa. Each is work ing independently of the other and responsible for his own job.

8. Where the anesthetist is not a physician, but a nurse acting under instructions of the operating surgeon, the surgeon will be charged with liability for his acts.

9. Where physicians jointly diagnose or treat a case they are jointly liable for each other's negligence. The entire judgment against joint tortfeasors may be collected from one defendant who must then try to re coup from the other defendants.

10. Partners are liable for the acts of each other and their assistants.

11. A physician is not liable for the acts of a substitute or specialist whom he recommends.

12. Where malpractice insurance specifies coverage is limited to acts of assistants "while acting under the assured's instructions," these instructions must be related to the specific case. General directions given previously to cover many situations will not suffice.

13. Government hospitals are liable for negligent acts of assistants or agents only by legislative enactment.

14. Charitable hospitals in many jurisdictions are liable for acts of employees in the same way as private institutions. Other jurisidictions distinguish between administrative and medical acts and limit liability to the former.

15. Private hospitals are liable for negligent acts of employees, whether the acts are medical or otherwise. Some jurisdictions take the stand, however, that physicians are independent contractors and cannot be under the control of the hospital. Hospital liability in those states is limited to care in selection of the physician."

Many of these jurisdictions however, extend liability of hospitals to acts of internes or residents, or even to staff physicians in cases where the hospital contracted to give more than routine service to patient.

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AN EXERCISE IN DIAGNOSIS— THE CASE REPORTS

IN addition to our regular quota of original articles, "Refresher" articles and departments, this issue, and every issue, contains selected Case Reports. You will find them on pages 492-498. We recommend these studies as interesting and stimulating.

BY JAMES E. BRYAN

A Shield of Protection

Money in the bank. That's what Blue Shield and Blue Cross can mean to patients —and to their doctors and hospitals. The Blue plans assure the sick patient of the prepaid services of his chosen doctor — and, if necessary, prepaid care in any hospital of his selection.

The Blues have rolled up the most remarkable enrollment record of any insurance program ever offered in America—at a minimum of sales expense and with a relatively "low pressure" sales approach. Everyone wants protection against the costs of unpredictable illness; but the main reason so many have chosen the Blues is that these plans are sponsored and recommended by doctors and hospitals throughout the nation.

More than 50 million people have purchased Blue Cross protection and more than 40 million of them have also become members of its younger partner, Blue Shield.

This heavy popular vote of confidence throws an equally great responsibility upon American medicine. The doctor and hospital must work together to preserve the confidence of the people. They must help their plans meet the challenges of today and tomorrow for an ever-growing and improving medical care program. Occasionally, they must make some personal sacrifice for the greater good of a free profession and a free society.

Service Benefits In previous articles, "service benefits" received mention as a distinctive feature of most Blue Cross and Blue Shield plans. Indeed, the service benefit idea is the one great attraction Blue Shield can offer the

patient which the insurance companies cannot match.

How does it work? A typical picture would be like this: Let's say that you're a "Participating Physician" in your local Blue Shield plan.

This means you are one of the 85% to 90% of all physicians in Blue Shield service benefit areas who have voluntarily signed agreements to cooperate with their local plans.

Usually, this agreement pledges you to accept the plan's payment as your full payment for any professional service covered by the subscriber's contract, provided the subscriber's income is within a specified "income limit" for service benefits. In other words, as a Participating Physician, you've formally accepted the plan's schedule of payments as your own schedule of fee for subscribers in the lower and moderate income brackets. And there's sense and logic in this. Whatever the local Blue Shield schedule of payments may be, it should represent the collective judgment of *you and your colleagues* (acting through your local medical society) as to what the acceptable local fees are for people in these income brackets. (If your schedule *doesn't* represent the thinking of the local profession, chances are it's the fault of the sponsoring medical society that such a condition exists.)

Then, too, over and beyond the fee schedule, remember that Blue Shield looks to its sponsoring medical society and its participating physicians for guidance in all its medical policies and procedures.

Whenever a Blue Shield service benefit patient comes to you for a service covered by his contract, you treat him as you would any other patient. *But you send your bill directly to the plan.*

In a week or two, you'll receive the plan's check, and coincidentally, the plan will notify your patient of the payment made to you.

Indemnity Perhaps you'll be practicing in an area where the Blue Shield plan operates on an "indemnity basis," or perhaps your patient's income may be such as to place him outside the service benefit category. In such a case, everything will be the same except that if the plan payment is less than the fee you'd normally charge this particular patient for the particular service you've rendered, then you're free to accept the plan payment as part payment and bill the patient for the balance.

In other words, in the latter case, you've accepted the plan's payment as an indemnity against your normal charge, and you'll look to your patient to pay the difference.

A service benefit plan, obviously, carries a special attraction for the low or moderate income patient. It assures him that if he needs an appendectomy, his prepayment contract will cover the full cost of the service, and he need not worry about having to supplement the plan's payment with extra dollars to meet his surgeon's bill.

Service benefit plans generally consider the service feature as their outstanding sales attraction, and most students of Blue Shield agree that without this feature Blue Shield would never have gotten "off the ground." This is certainly tantamount to saying that were it not for Blue Shield's service benefits, America's health insurance program might conceivably be dominated today by some form of government medicine.

Service benefits do great credit to the medical profession in the eyes of the

Blue Shield is an organization of the profession itself, not a "third party." Not only must a Blue Shield plan be approved by its local sponsoring medical society, not only must the plan's medical policies be under medical control, but it must earn and retain the voluntary participation of at least a majority of all the doctors practicing in its area of operation.

people generally, because the service benefit arrangement de-emphasizes the cash aspects of medical practice and highlights the idea of service. Thus, service benefits dramatize, tangibly, the service traditions of medicine.

Not only does this feature furnish the one incontrovertible justification for medicine to sponsor a prepayment plan, but it also gives every participating doctor an opportunity to make a concrete contribution and to play an active part in his profession's own program for the solution of our greatest national problem in medical economics.

No Third Party Medicine has always been on guard against any "third party" coming between the doctor and his patient. When any agency enters this picture, allegedly to help the patient or the doctor or both, the profession is likely to ask two questions: First, is it likely, or even possible, for this agency, directly or indirectly, to affect the doctor's professional freedom and responsibility for the care of his patient? Secondly, is this agency controlled by the profession or subject to its control?

Blue Shield—*alone* among all prepayment or health insurance programs so far evolved—can answer the first of these questions in the negative and the second in the affirmative.

The Board of Directors of the national association of "Blue Shield Medical Care Plans" recently declared that "Blue Shield Plans exist only to help the medical profession facilitate the provision of its services to the people . . . Blue Shield is an organization of the profession itself, and not a third party . . ."

For not only must any Blue Shield plan be approved by its local sponsoring medical society, and not only must the plan's medical policies be under medical control, but it must earn and retain the voluntary participation of at least a majority of all the doctors practicing in its area of operation.

Doctors and Insurance Blue Shield plans were organized by the medical profession itself at a time when the insurance industry said prepaid medical care was not feasible. They were right. Medical prepayment, as a service plan, could not be organized and offered by an insurance company. This job had to be done by medicine itself.

Blue Shield succeeded because American medicine was behind it. In the early days, participating physicians accepted less than normal schedules for their services. They also agreed to accept (and in many areas they have actually accepted) pro-rated portions of those fees when the local plan was un-

The "service benefit" idea is the one great attraction Blue Shield can offer the patient which the insurance companies cannot match. Without it, Blue Shield "would never have gotten off the ground."

able to pay the full schedule. Thus, the profession has acted as the underwriter as well as sponsor of many of the Blue Shield plans.

Beyond that, professional leaders in all parts of the country have given incalculable hours of their time, without a cent of remuneration, as the directors and trustees of Blue Shield plans.

Did doctors accept these responsibilities in order to put medicine "in the insurance business?"

Certainly not! Medicine is in the business of providing medical care—nothing else. Doctors are always concerned with the ways and means by which patients pay for medical care, and they quite naturally want to make sure that the profession itself may continue to control the economy of medical practice.

Blue Shield represents the most outstanding example of professional cooperation and teamwork in modern times. It is all the more remarkable when you remember that this cooperation has taken place in a field of operation quite foreign to the doctor's training. That's why it is so important for all physicians to become acquainted with the basic principles of prepayment —and especially the dynamics of Blue Shield.

Law of Averages One of these principles is the vital role that the law of averages plays in all insurance operations. Averages are of little interest in medicine where every case, every patient every doctor, every reaction—is unique. No two operative procedures, though they bear the same name—are ever precisely the same.

As a general rule. Blue Shield cannot pay more for the tough case, nor less for the uncomplicated one. Blue Shield asks the doctor to conceive the *average* —and to think in terms of it.

But this works to the doctor's advantage, too, for Blue Shield pays him for services rendered to many of his patients who, except for Blue Shield, would reluctantly qualify for his unpaid services as ward patients in the hospital.

Growth Today, the public recognizes Blue Shield as a major item in America's social progress. The continued growth of Blue Shield is necessary for several reasons:

- Medical prepayment creates a credit for the patient and protects his future; where old-fashioned post-payment created heavy debts and mortgaged the patient's future.
- Blue Shield's growth safeguards its base of operations. As risks are spread ever more widely, both the community and the doctor are protected against fluctuations both in rates and in payments to doctors.
- The bigger the plan, the lower the

Blue Shield's growth safeguards its base of operations. As risks are spread over more widely, both the community and the doctor are protected against fluctuations both in rates and in payments to doctors.

per capita cost of operating the plan, and the larger the proportion of income available for benefit payments.

• The greater the number of patients covered by prepayment, the fewer for whom the doctor has a collection problem, and the lighter his load of free or part-pay work.

Alternatives What are the alternatives to Blue Shield? The first to come to mind, of course, is the commercial insurance company. But these are only partly alternatives, in that they cannot offer prepaid service benefits. And they are competitors only in a partial sense, too, for the commercial companies are primarily interested in insuring those parts of the community that offer some prospect of profitable underwriting.

Another alternative form is the salaried group (such as H.I.P. in New York or the Kaiser-Permanente organization in California) which operates under its own prepayment arrangement. These plans offer generally a more complete or "comprehensive" scope of service than Blue Shield plans, but the patient's choice of physician is limited to the group or groups participating in the program, and his choice of physician within the group is also limited.

Labor unions in metropolitan centers (New York, St. Louis, Detroit, etc.) or within certain industrial areas (such as the coal mining fields) are promoting various "closed panel" schemes on a salaried or annual capitulation basis.

Finally, there are the alternatives of government administered, compulsory health insurance or straight out state medicine with salaried physicians.

These alternatives were once far more actively and hopefully anticipated by organized labor and some social welfare groups than they are today, in the light of the widespread popularity of the Plans.

Blue Shield has brought prepayment into the prevailing and traditional forms of private practice in the United States. It is equally adaptable both to the older pattern of solo practice and to the newer forms of group practice. It does not require that medicine change its modes of practice but leaves the profession free to adopt whatever changes seem desirable to improve the quality of practice and the care of the patient.

The doctor is the key man—or, at least, his voice can and should be the controlling voice in shaping the future of American medicine.

Blue Shield is his servant, not his master. It deserves his wholehearted support because it is fashioned in his own image. It is his creation, and it has no purpose other than to help the doctor better to serve his patient. Blue Shield helps safeguard the freedoms of medicine which both the doctor and his patient want to keep strong and secure.





CLEVELAND

Cobalt-60 teletherapy unit (top left) being described by Otto Glaser, Ph.D., head of biophysics department. In center photo, resident discusses film with George Crile, Jr., M.D., department head in general surgery. Bottom, bedside teaching is conducted by A. Carlton Ernstene, M.D., chairman, division of medicine.



FRANK E. BUNTS EDUCATIONAL INSTITUTE

A private institution, the Foundation draws primarily on private patients for its wide variety of clinical material. The four integrated units of the Foundation are staffed by 110 full-time physicians, 145 fellows, residents and interns. Service patients are available through an affiliation with other Cleveland Hospitals.

CLINIC FOUNDATION

The Cleveland Clinic Foundation, known to many as the Crile Clinic, is in reality four functional units —the Cleveland Clinic, the Cleveland Clinic Hospital, the Research Division, and the Bunts Institute. All are coordinated within the structure of the foundation.

Patients are drawn chiefly from outside Cleveland; from the entire United States plus many from foreign countries.

Although many Clevelanders regard the Clinic as their "family physician," the bulk of the patients register because of diagnostic problems, the greater percentage being cases referred for diagnosis, survey or therapy. Medical problems presented are diverse and the diagnostic and therapeutic considerations challenging.

The Foundation was organized in 1921 when four physicians, Frank E. Bunts, George W. Crile, William E. Lower, and John Phillips, signed the articles of incorporation. The four had learned the value of cooperative medical effort first in World War I and later as members of a loosely constructed partnership; they established the Foundation on a sound basis insuring its subsequent growth.

The Staff now numbers 110 full-time physicians, 145 fellows (residents) and interns, and 1300 employees.

As the Foundation grew, so did its educational endeavors—so much so that in 1935 it was decided to establish education as a separately administered project. Its name honoring one of the four founders, The Frank E. Bunts Educational Institute was incorporated "to establish, maintain, and conduct an institution of learning." The new school was chartered under the laws of the State of Ohio.



Present Today the Cleveland Clinic Foundation through the Bunts Institute conducts graduate, postgraduate, and technician training and participates in nursing education. The Institute offers 19 approved training programs in the various specialties as well as fellowships in research and internships.

Six to eight postgraduate courses are offered yearly, principally review-refresher courses in the specialties. Technical training courses are conducted in physical therapy, medical technology, and x-ray technology. Although the Foundation does not have its own school of nursing, the Institute provides hospital experience for students in the nurse-training program of two Cleveland colleges. In addition, the Institute produces educational movies and exhibits and supervises the publication and distribution of the medical journal, the *Cleveland Clinic Quarterly*.

Graduate Training The graduate training effort is a carefully planned and comprehensive complex of 19 specialty training programs approved by the specialty boards and by the American Medical Association. The major portion of the instruction is conducted on a departmental basis in the form of bedside teaching, clinical practice, departmental conferences, and seminars. An over-all program of lectures, conferences, and teaching exercises is scheduled on a weekly basis from September through May inclusive. In addition, both the divisions of medicine and surgery* conduct a basic science review

* The Clinic staff, which also serves the hospital, is divided into medical and surgical divisions for convenience of administration. The division of medicine, under the chairmanship of A. Carlton Ernstene, M.D., conducts 13 specialty departments, and the division of surgery, under the chairmanship of Stanley O. Hoerr, M.D., conducts 11.



which is a refresher-progress type course designed to cover the field in each subject over a two-year span. Eight other Cleveland hospitals send their interns and residents to the basic science lectures and to the programs offered on Saturday.

Clinical teaching is actively carried on by all departments and divisions. Graded responsibility is accorded to the resident entirely upon his adjudged ability to accept such responsibility. Emphasis is placed throughout the program on the thought that educational endeavor and clinical responsibility must be kept apace, that the student must develop in capability, knowledge and skill as he is more and more entrusted with medical and surgical management. Therefore, although the programs with one exception are not pyramidal in nature, continuation in any program is dependent upon sound professional development and achievement; appointments are made on a year-to-year basis.

Although the Cleveland Clinic and the Cleveland Clinic Hospital generally serve only private patients, the training program has been in effect for so long a time and the emphasis on graduate education is so obvious, that all patients, regardless of their station in life, participate willingly in the program. Thus the opportunity to learn management and handling of the private patient is one of the major advantages presented. Further, the Foundation, being a referral clinic in which diagnostic and therapeutic problems predominate, has a remarkable fund of teaching material. The complexity of cases seen in all departments is such that difficult problems become accepted as routine; the "unusual" and "rare" are common.

Affiliations are maintained with four hospitals in the city to make available service-type patients in the fields of obstetrics, ophthalmology, and otolaryngology and to furnish extensive experience in treatment of trauma for those in general surgery. An affiliation is also maintained with Buffalo Children's Hospital for experience in children's orthopedics. In addition, the departments of anatomy, dermatology, ophthalmology, otolaryngology and pathology participate on a cooperative, resource-sharing basis with other Cleveland teaching installations.

Internship Through its hospital the Foundation offers a limited number of rotating internships to graduates of Class A medical schools. Selections are made from senior students of those schools through the National Intern Matching Program. The internship, as approved by the Council of Medical Education and Hospitals of the Ameri-



Stanley O. Hoerr, M.D. surgery division chairman conducts surgical conference. Pictured below: A. W. Humphries, M.D., vascular surgery, and Clinics' artery bank.

can Medical Association, consists basically of three months medicine, three months surgery, two months obstetrics and gynecology, two months pediatrics, and two months elective.

Interns participate in the over-all teaching program and are an integral part of the activities of the department to which assigned. In addition, they receive instruction in the philosophy and art of medicine. Basic instruction is, of course, clinical, and patient responsibility is stressed throughout. Thus, from the very beginning of graduate training, the intern has the opportunity to learn the proper handling of private patients.

Teaching Plan The Bunts Institute and the professional staff of the Foundation have arranged the training program to keep teaching exercises as free from interruption as possible. To that end, Saturday mornings have been set aside for teaching purposes. Accordingly, ward rounds are completed by 9:00 A.M. and except for emergencies, residents and interns spend each Saturday morning from September through May attending correlated teaching exercises.



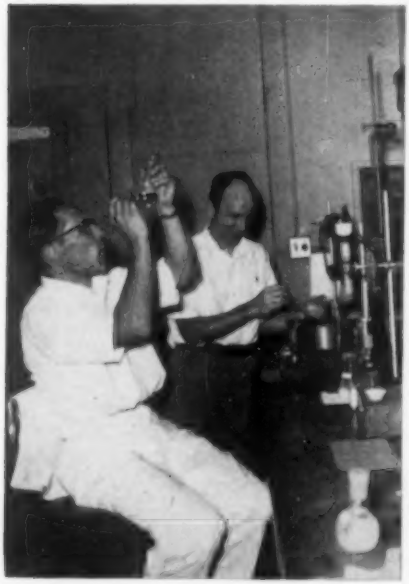
The first event of Saturday morning is the Clinic Conference, a major medical-surgical presentation to the entire staff. This is followed by two sessions, one on divisional level and the other on departmental level; each resident at-

tends the conferences or seminars directly related to his specialty interests, and each intern attends those related to his departmental assignment.

The Saturday morning effort is supplemented by evening sessions throughout the week with schedules beginning at 5:15 P.M. extending in some cases to 8:00 P.M. During the summer, the "shakedown period" in which clinical and bedside teaching prevails, the more formal program is replaced by grand rounds and anatomy instruction.

Plant Units The physical plant is located four miles east of the center of downtown Cleveland, occupying buildings and grounds bounded by East 89th and 96th Streets and Euclid and Carnegie Avenues.

Five main buildings comprise the central unit: the four-story north clinic building (the original Clinic), the ten-story south clinic building, the 510-bed hospital, the eight-story research building, and the combination power plant and laundry. Parking lots and buildings such as pharmacy, nurses' home, and residents' quarters fringe the central unit in an irregular pattern. Within a mile radius are four other hospitals plus the Cleveland Health Museum, Western Reserve University and its School of Medicine, Case Institute of Technology, the Allen Memorial (medical) Library, Severance (symphony) Hall, the Art Museum, the Art Institute, and the Museum of Natural History.





Above, basic research conducted by Francis M. Bumpus, Ph.D., and Hans Schwarz, Ph.D., team which in 1956 synthesized angiotonin II. Right, view of residents' lab in the Cleveland Clinic Department of Pathology.



Donald Effler, M.D., thoracic head, and Willem Kolff, M.D., research division, work with surgical team during open-heart operation. Note membrane oxygenator.

Clinic The Clinic itself occupies two buildings, the four-story north and the ten-story south clinic buildings. Thirteen medical and eleven surgical departments see more than 800 patients a day. The departments of radiology, physical medicine and rehabilitation and clinical pathology each occupies an entire floor. Seven floors of the two buildings are used by the departments having the most direct clinical contact with patients. Administration offices and the Bunts Institute occupy the remaining floors.

Patients move through the complex arrangement on a carefully developed plan and little time is lost either by the physician or by the patient. Every effort is made to free the physician from administrative detail so that his full time may be devoted to medical problems.

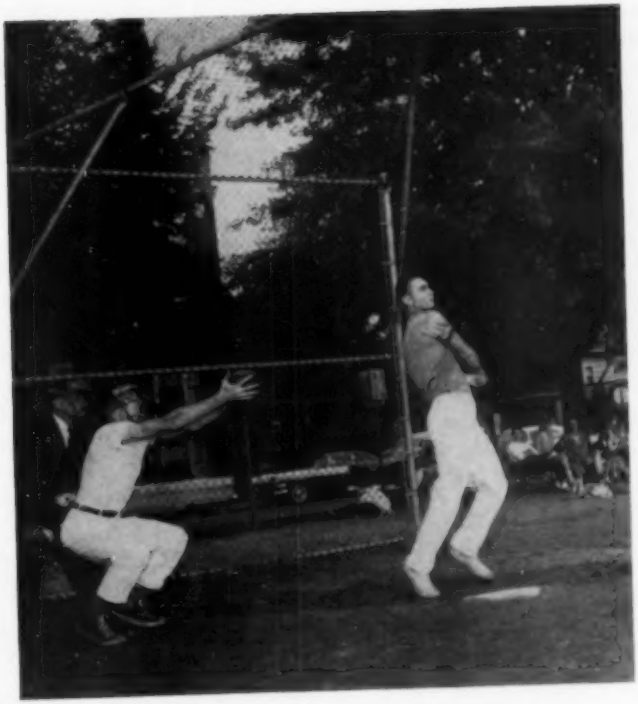
The functions of the Clinic and the Hospital are closely integrated: the Clinic carries on the major diagnostic studies that can be done on an ambulatory basis; the Hospital performs indicated studies that are beyond the capabilities of ambulatory workup. The Hospital, of course, also accepts direct admission of emergencies and carries out needed medical and surgical therapy.

Hospital The 510-bed, 40 bassinet Hospital is an eight-story, maltese cross-shaped structure. Like so many other hospitals, it has grown wing by wing, the first wing was opened in 1925, the most recent in 1956. At the conclusion of the present modernization program, the old as well as the new areas will offer the ultimate in equipment and convenience.

Surgery, for example, is located in the new wing and comprises 22 operating rooms plus all supporting services. Particular features are the surgical library, conference room, cardiac arrest alarm system, transcription room with its four dictating machines and the adjacent constant-care unit. View galleries are located in every operating room and are reached by a corridor system which is separate from the sterile areas. The department of pathology is located within the surgical unit itself, the prox-



Left, house staff rooms are modern, pleasant. Below, resident takes his cut at the ball in a house staff game.



imity to the operating theatres being an obvious convenience.

Research Division The division of research, which occupies an eight-story building, carries on both full-time and part-time research under the direction of Dr. Irvine H. Page. The coverage is broad, ranging from basic science to clinical investigation. A 20-bed research ward is devoted to the study of the problems of hypertension and related subjects. Facilities for individual work are available and appointments as Research Fellow and Research Associate are available to those interested and qualified.

Bunts Institute The offices of the Bunts Institute, the library, the editorial department, the large Bunts Auditorium, two classrooms, and the offices of the editor of *Circulation Research* are located on the fourth floor of the north clinic building. Three other classrooms are available elsewhere in the institution. The five classrooms range in size from a thirty-seat conference room to a one-hundred seat lecture room. Seminars are usually held in the department concerned. The major exercises are held in Bunts Auditorium and the larger teaching sessions are held in adjacent classrooms.

Library The Medical Library, under the supervision of a medical Librarian, serves the entire Foundation. More than 10,000 bound volumes are catalogued and more than 300 medical and surgical journals are received currently. Journals and books not available in the Foundation library can be obtained readily on loan from the nearby library of the Cleveland Medical Library Association, which cooperates on a reciprocal basis.

HEMODYNAMIC EFFECTS OF SQUATTING DURING RECOVERY FROM EXERTION

"Squatting causes kinking of the femoral arteries and veins in the groins and of the popliteal arteries and veins in the popliteal fossae. Blood flow in the legs is reduced, mainly as a result of obstruction to the venous return.

"When patients with cyanotic congenital heart disease exercise, the oxygen content of femoral venous blood falls precipitously. This desaturated blood reaches the right side of the heart and is shunted into the systemic arteries. The oxygen saturation of arterial blood falls in consequence. Squatting impedes the venous return from the legs and therefore minimizes the tendency of the arterial oxygen saturation to fall with exercise."

Leon Brotmacher

British Heart Journal, Vol. XIX, No. 4, P. 573

How Is Your Patient Insured?

Here's how to find out. Does your patient actually have a lot of insurance or none at all? Knowing insurance is good public relations.

RALPH R. BENSON, LL. B.
Los Angeles, California

A doctor is not expected to be an expert in the fields of law and insurance, yet the patient today assumes that the doctor knows everything about what is included in or excluded from his insurance policies.

Suppose the patient tells you he has insurance. You might schedule a surgery at your base hospital two weeks from now, only to find a day before the patient is to go into the hospital that the patient had insurance but no hospital coverage, or that the policy only covered up to $10.00 per day towards the hospital bill. Embarrassing for the doctor.

Take another case in point where a doctor, being informed by the patient that he had group insurance, rushed the patient to the hospital and operated for a hernia. The insurance clerk at the hospital on checking with the insurance company was told that the company would not pay the hospital bill or the doctor because the operation took place within eleven months after the policy was taken out. Luckily for the doctor the patient had another insurance policy which he discovered among his papers which would finally pay.

Suppose when the patient first came into your office you or your aide went over a check list of specific types of insurance, then you would have a better idea of the insurance company you were dealing with. Here is a list which might be very handy in your office.

KINDS OF INSURANCE

- ☐ Blue Cross—nationwide.
- ☐ Blue Shield—nationwide. Might be joined with Blue Cross.
- ☐ Group Insurance—For Employees.
- ☐ Union Insurance—Welfare Fund. A fringe benefit obtained by unions for its members.
- ☐ Accident & Health.
- ☐ Medical & Surgical.
- ☐ Medicare—New coverage by United States Government for service man's dependents at home.

About The Author

Heads his own law firm of four attorneys. Accident trial work has been his specialty for the past ten years. He is a contributor to "Insurance Law Journal"; is an active member of the American Medical Writers Association and a former lecturer in the extension Division of the University of California. He is a member of the American Bar Association, Insurance Section.

- ☐ Major Medical—Employee pays a deductible and percent of balance.
- ☐ Interscholastic — Among school teachers.
- ☐ Disability—May only cover loss of earnings, not medical.
- ☐ Owners, Landlords & Tenants — Medical—for injuries sustained as a guest on somebody's property.
- ☐ Newspaper — Extremely limited benefits bought by newspaper subscriber.
- ☐ Industrial—Injury on the job with limited payments covered by Industrial Insurance Company for employer.
- ☐ Veterans—United States Government.
- ☐ Auto-Medical Coverage — Auto policy covering occupants up to $500.00, $1,000.00 or $2,000.00 or unlimited per person. Also extended medical coverage.
- ☐ Liability Case—Other Car Insured —Will pay medical bill if driver of other car is insured and legally responsible for accident.
- ☐ Uninsured Auto Policy—Will pay medical and other benefits if other car is not insured.
- ☐ Comprehensive Personal Liability.

With the help of this list stimulating your patients' memory, you can then get the name of the company involved and have your assistant call or write to each company to verify the insurance and coverage. When calling a company, make sure your aide writes in your file or charts the name of the insurance company, the person's name she speaks to, and the telephone extension number.

Knowing insurance is good public relations. It is far better to assist the patient with insurance forms and papers than to turn an account over for collection with hurt feelings and loss to the doctor of possibly the patient and certainly the cost to the doctor of the collection charge.

Inside the billing envelope where there is a blank space, a doctor can rubber stamp this cooperative message to the patient:

"Know Your Insurance—

The doctor's office will gladly assist you in filling out the insurance forms without charge."

1021 Chester Williams Bldg.,
215 West 5 Street

THE MEN WHO MADE THE MEDICINE...

Who was Parke? What did Davis do?
How about Lilly, Ayerst, Burroughs and Wellcome, Wyeth,
Eaton, Squibb, Roche, Merck, Sharp and Dohme?
Was there a Mead Johnson or was it Mead *and* Johnson?
Who was Smith and Kline and French?
What did men like Pfizer, Robins, Searle, Winthrop,
Upjohn, Lederle, Bristol and Schering actually do
for the companies which bear their names?
Was there a Dr. Ciba? Who were the Burns Brothers?
What is known about Warner and Chilcott,
Abbott, White, Massengill, McNeil and others
whose names appear in drug company titles?
The editors of MEDICAL TIMES went looking for the answers
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DRUGS

. . . Pharmaceutical Company Founders





Dr. Duffield, scientist, and Hervey Parke, businessman son of a country doctor, made ideal partners —but little money. George Davis came along to supply the sales punch needed to survive in a highly competitive field and the Detroit drug firm, "that upstart company from out West," began to establish itself as a new leader in pharmaceutical manufacture

Top to bottom: Duffield, Parke and Davis.

from Detroit

On April 9, 1865 Lee surrendered to Grant at Appomattox, Virginia, ending four years of bitter and bloody war between the states. Two days later the news reached Detroit.

The city erupted in a roaring celebration. Three companies of blue-clad soldiers got things started when they marched in and, on command, fired their 200 rifles into the sky. Horses reared, women screamed and men shouted as the crashing noise gave way to the massed singing of "John Brown's Body."

Young men and women danced in the streets and strangers slapped one another on the back, repairing to saloons to get better acquainted over glasses of whisky. Beaming bartenders announced drinks on the house.

Dr. Duffield In an official ceremony, conducted before the celebration had gotten completely out of hand, four prominent citizens addressed the crowd. One of the speakers was a man with finely-chiseled features, a flowing beard and a thick thatch of hair, carelessly combed. The ceremony over, he dodged through the dancing, singing throng; hurried to a small drug store on a downtown side street. A sign over the door identified it as "Dr. Samuel P. Duffield & Company."

Inside were the three demanding contraptions that, like children unattended, forced him to leave the wild celebration in order to watch over them.

The man was Dr. Duffield and the contraptions consisted of a still that could produce two barrels of alcohol per day, an iron-ammonia press and a hydraulic hand press.

His advertisement in the Detroit City Directory called "special attention" to his "ether, sweet spirits of nitre, liquid ammonium, Hoffman's anodyne, etc., mercurial ointment, and blue pill mass, etc. For photographers and physicians our ether is unequalled in purity. List of prices furnished on application."

Three years earlier, in 1862, Dr. Duffield had established the first pharmaceutical manufacturing laboratory west of Buffalo, New York. They had been years of struggle and disappointment. Shipping service to Detroit was worse than poor; physicians were skeptical of this new company in a backwoods city; no hard-headed businessman would extend credit or invest capital in such a folly.

Even so, Dr. Duffield kept his business going. Ever since boyhood his dream had been a career in medicine or chemistry, and it was especially satisfying for him to start this career in Detroit, the city that had been his home since his parents moved there from Pennsylvania shortly after his birth on Christmas Eve, 1833.

He was accustomed to poor odds. Nine years earlier some of the country's best oculists told him he'd soon be blind. Not satisfied with this sentence, he quit medical school at the University of Pennsylvania and went to Berlin, Germany, for treatment.

Degree Young Duffield was treated at the Berlin Clinic for three months, meanwhile continuing his studies at the University of Berlin. The treatments were successful, but he didn't return home.

Intrigued by the Germans' knowledge of chemistry and physics, he studied at Maximillian University in Munich and Ludwig University in Giessen. When he returned to Detroit with his Ph.D. degree, he was determined to put his new-found knowledge to use in the business world.

But the eye treatments and his European schooling had exhausted his funds, so he took a job as head of the chemistry department at the Detroit College of Medicine. Professor Duffield stayed there just long enough to earn a degree in medicine and to save enough money to open up a small drug store.

This was the first step in his plans. The second step came several years later, in 1862, when he set up the manufacturing laboratory.

Make a Showing In 1865, when the war ended, business was still far from profitable, but Dr. Duffield managed to keep going for another year. Then he needed financial help.

On May 23, 1866, he took in A. L. Patrick as a partner for an investment of $10,000. Business then totaled about $15,000 a year, but operating expenses left no profits. Patrick had his fill of Duffield's dreams within a couple of months, and sold his interest to Francis C. Conant, a businessman who withdrew his funds from a chair manufacturing company to join the young doctor. The new partner had a favorite expression, "We must make a showing."

"Mr. Conant favored spreading out," Dr. Duffield said in later years. "He wanted improvements, fine buildings. He wasn't satisfied to go along in a modest way until we were established on a firm footing. The result of this policy was that within a few months we were $10,000 in debt. I took Conant aside and told him such a condition of affairs would never do, that we couldn't go on as we were. He became dissatisfied and on October 26, 1866, he sold out his interests . . ."

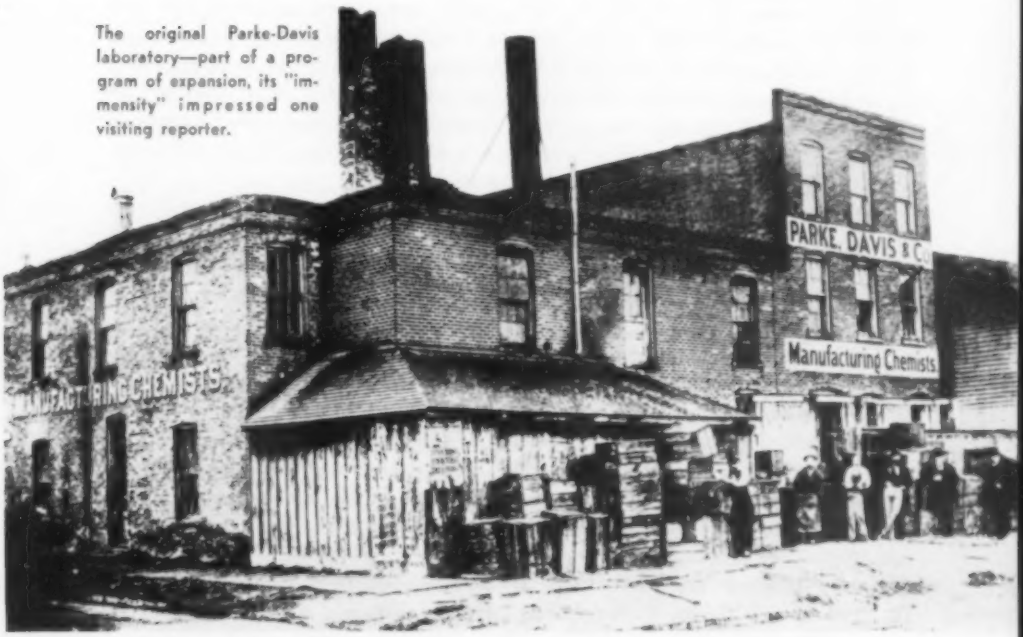
Enter Parke The man who bought Conant's share of the company was Hervey C. Parke, Duffield's third partner in five months. This was no spur-of-the-moment speculation for the tall, scholarly-looking gentleman with the soft-spoken manner. Parke consulted frequently with Dr. Duffield before deciding to buy into the small company. At the age of 38, he was regarded by his friends and business acquaintances as "careful and conservative" and a "safe and legitimate financier."

Although Parke was the son of a Michigan country doctor, he knew little about medicine or pharmacy. His was strictly a business background except for a year spent as a schoolmaster.

At the age of 17 he was working in a Buffalo, New York, upholstery factory. The death of both his parents in a "mysterious epidemic" brought him back to Michigan two years later. Other jobs followed: clerking in a hardware store in Adrian, Michigan; school teaching; selling in a general store.

Copper Country In 1850 he became financial manager of a copper mine in upper Michigan. (He'd had trouble with his health, and a physician friend had advised him to go to that cold, dry climate.)

In 1860, when he was still at the mine, he married Fannie A. Hunt, daughter of a Michigan congressman. A year later Parke bought a hardware



The original Parke-Davis laboratory—part of a program of expansion, its "immensity" impressed one visiting reporter.

and general store in the nearby Portage Lake region and became one of the first settlers of the village of Hancock in Michigan's "copper country."

The store held his interest for four years, during which time his wife gave birth to two children and he served as the first village president.

In 1865 Parke sold the store and decided to move to Detroit, where business opportunities seemed more plentiful and a great deal more profitable. He booked passage early in August on the steamer *Pewabic* for himself, his wife and the children—a decision that nearly led to their deaths.

The steamer had completed over half of its 600 mile voyage to Detroit when it was rammed by another ship, the *Meteor*, on the evening of August 9.

Parke rushed with his family to the deck of the crippled *Pewabic*. They, the captain and a number of other passengers managed to scramble to the decks of the *Meteor* before the two vessels separated and the *Pewabic* slid below the surface of Lake Huron. Between 75 and 100 other passengers and crewmen were not so fortunate—they went down with the ship. The *Meteor* managed to complete the journey to Detroit without difficulty.

For nearly a year the cautious Parke investigated business opportunities in Detroit, supporting his family with the profits made in the sale of the hardware store. Then, satisfied that he was making the right move, he bought Conant's interest in Doctor Duffield's small laboratory.

Ideal Partners The partnership of Dr. Duffield and Hervey Parke was an ideal one. Duffield, the scientist with little business acumen, managed the manufacturing phase of the operation. Parke, the careful businessman with little scientific knowledge, handled the financial end.

But there still were problems to be solved. The eastern firms, in a move to crush this upstart company from Detroit, were extending indefinite credit to wholesale and retail druggists. To survive, Duffield, Parke & Company needed an aggressive sales program, but neither of the partners had any selling experience in the highly competitive drug industry. They looked for an aggressive salesman to handle this end and found him in 1867 in the person of George S. Davis.

Davis was small in stature, always neatly dressed and with dark hair and a dark moustache. Contemporaries said he was inclined to be dictatorial and autocratic with his employees, but an "energetic and aggressive" salesman with an "almost irresistible" selling approach.

"He was a small man, always very neat and tidy and with a very erect posture. When he walked along the street, you just knew who he was. His mannerisms told you this man was Mr. George S. Davis," one former employee wrote in his memoirs.

Think Big Davis thought big. He had progressive ideas on how to run the business, and was determined to have the name of his company make a lasting impression on clients and prospective clients alike. Once, when the firm was involved in a dispute with an important Chicago wholesale drug com-

pany, Davis sent a man there with specific instructions on how to make an impression.

"When you arrive in Chicago," Davis told him, "hire the finest team of horses you can get, with a coachman up. Keep it standing outside the customer's door all the time you are inside transacting your business."

Davis was a proud man with a proud family heritage. Both his parents could trace their American ancestry back to the English colonists; ancestors on both sides had fought in the Revolutionary War.

Young George had attended grammar and high school in Detroit, and then was given the choice of either going on to college or entering the business world. He chose the latter and joined the Detroit wholesale drug firm of Farrand, Sheley & Company as a 17-year-old sales trainee. He was only 22 when he joined Parke and Duffield, but had already established himself as a successful drug salesman who knew all the ins-and-outs of the business.

Progress There still were no profits to show, but Duffield, Parke & Company began making progress. New products were introduced; advertisements started emphasizing "fluid and solid extracts, sugar-coated pills, concentrations, elixirs, and syrups." Then, another unforeseen difficulty developed.

Six years of working in a poorly-ventilated laboratory filled with fumes and tiny particles of chemical dust began to affect Dr. Duffield's health. His wife became ill, too, and his family needed him at home in the evenings; no longer could he spend long hours at the lab.

In addition, a change in the government tax structure took all the profits out of his pet processes for manufacturing many of the products. His prized copper apparatus was tossed out on the scrap heap, and new equipment that could perform the same functions at lower operating costs was installed.

Jennings He began losing the enthusiasm that had kept him going for six years without one cent in profits to

FROM THE OLD SCHOOL . . .

Hervey Parke once taught in a country school near his birthplace. Nineteen pupils in the school were older than their 21-year-old teacher, and the young men often tried to take advantage of their greater strength and stamina. An 1886 article from the *Magazine of Western History* tells how one of these pupils became belligerent and "threatened to break up the school." Parke, the teacher, decided to become Parke, the disciplinarian. He chased after his boisterous pupil, and they collided in the classroom.

"Mr. Parke readily admits that he was heavily pressed in the contest that followed," the magazine reported, "but he retired from the field with the victory in his hands, and had the satisfaction to receive from his antagonist a promise to reform, sincerely made and so far redeemed that the defeated pupil taught the same school during the following school year."

show for his efforts. At his suggestion, Dr. Augustus F. Jennings was brought in to handle the manufacturing end.

At this point the historical facts become sketchy. Little information can be found on Jennings' background or the position he held as a new partner.

Records show the firm was listed as Parke, Jennings & Company for a short time. Then another reorganization apparently took place, and the partners were listed as Duffield, Parke, Davis, and Jennings.

Eventually Dr. Duffield left the company to go into private practice as a physician. Company records show he left on January 14, 1869.

Dr. Jennings stayed only a short time. In 1871 Parke and Davis became sole owners, and the name "Parke, Davis & Company" was painted above the door for the first time.

Under their management, the company began an era of unprecedented progress. In the summer of 1873 construction was started on a new brick laboratory along the Detroit River waterfront. (Now, 85 years later, Parke-Davis' main offices, laboratories, and research facilities totaling 65 buildings are grouped around this original location.)

Plant Tour A *Detroit Post* reporter visited the newly-opened laboratory in October, 1874, and wrote a feature on what he saw there. He described the two-story brick building as being in the shape of a "double L."

The first floor consisted of a combination boiler-and-engine room housing two boilers and a 40 horsepower engine, a mill room equipped with mills, chasers, and other machines for chopping and reducing herbs, a drying room, a laboratory equipped with retorts, stills, steam evaporating pans, drying ovens and precipitating jars, a "press" or fluid extracting room and four store rooms.

The second floor housed a tool room and workshop, a solid extract room, a four-room pill manufacturing department, a fluid extract storeroom where 275 varieties of extracts were kept, a finishing room for packaging and labeling finished products, a finished goods storeroom, and the general offices.

Although the reporter completed the tour in less than two hours (a tour now takes about ten hours), he commented on the "immensity" of the facilities. This was long before the advent of the automobile, and Parke-Davis at that time was Detroit's biggest industry next to the stove manufacturers.

Grinning Skeleton The newsman ended his story with a few comments about the nature of the pharmaceutical industry:

"The patient is no longer compelled to swallow huge and nauseous doses, the very odor of which cause his stomach to revolt. The manufacturing chemist has proven himself the benefactor of suffering humanity . . . not only in bringing to him the healing drug, but in presenting it in a palatable shape.

"A grinning skeleton has been taken away from the bedside of the sick when the array of bottles and bowls, the very recollection of the contents of which makes one shudder with horror, gives place to the simple and palatable draught which modern science has provided."

Parke-Davis' 1874 catalog listed about

300 products, including 254 types of fluid extracts, 300 types of sugar-coated pills and granules—"Private formulae made and coated to order, when desired in lots of 3,000 and upwards"—74 types of solid extracts, 53 concentrations, 46 medicinal elixirs, 23 medicinal syrups, 15 medicinal wines, 8 alkaloids, 9 miscellaneous products, chemically pure chloroform, and one specialty product. (Today's Parke-Davis catalog lists some 600 products including about 80 specialties.)

Research Both partners realized their firm had to do more than merely offer a wide list of products and an unchanging catalog year after year. They agreed research was the answer, and invested large sums in organized programs.

These weren't research programs as we know them today. Chemical synthesis, biological therapy, cancer research, clinical testing and other modern-day methods were still unheard of.

The two men remained in their conference room long after business had closed for the day, studying maps of tropical areas and conferring with botanists and explorers. Their research program consisted mainly of financing botanical expeditions searching for new vegetable drugs. The programs paid off. More than 15 new plant drugs were introduced during the first few years.

They managed to survive the money panic of 1873, but soon found themselves facing the same financial barrier Dr. Duffield had encountered six or seven years earlier. They needed outside capital to continue their progress. Davis took on the job of trying to attract Detroit financiers to invest in the firm; he became a familiar figure in downtown Detroit as he visited one businessman after another in his search for new capital.

First Profits Finally he succeeded in obtaining enough financial support to give the company a paid-in capital of about $82,000. On January 14, 1875, Parke, Davis & Company became a corporation under Michigan law with Parke as president, Davis as general manager, and three other stockholders.

Two years later, the year-end balance sheets showed net earnings of $5,264.65—the first profits ever earned by the company. This was 14 years after Dr. Duffield had set up his still and 10 years after Parke had bought into the venture.

Profits were coming in, but still there were problems to be solved. Talking about this period, Davis once said that if one Detroit banker had decided to call in his loan, it would have meant the end of the company.

Business was confined mainly to the Midwest and the South. They had only one customer in Texas, and even a mere price inquiry from west of the Rockies was a curiosity. Physicians in New York, Boston, and Philadelphia refused to admit Parke-Davis salesmen into their offices.

In the East, the maverick manufacturers from Michigan were regarded as "that upstart company from out West."

One day in August, 1879, the entire day's sales consisted of a 40-cent order for 100 pills.

Chemical Assay Davis knew they had to accomplish something outstanding to prove themselves to the medical

profession, so he tackled one of the biggest problems the industry faced at that time: the inconsistency in strength of any given drug. Physicians prescribing heart tonics or narcotics had no assurance that any two dosages would be the same in strength and produce the same response in the patient.

Parke-Davis assigned a research scientist to work on this problem and, in 1879, made pharmaceutical history with the announcement that a Parke-Davis preparation had been standardized through chemical assay.

Meanwhile the search for new plant drugs continued. In 1880 they sent Count Hansen, a famous explorer and adventurer, to the Fiji Islands for a supply of Tonga bark and to investigate herbs used by the native medicine men. Tonga was introduced to the medical profession in 1881.

In 1885, a distinguished botanist, Dr. H. H. Rusby, was sent to South America to study medical flora and to buy coca. His discoveries resulted in the introduction of several more new products.

Manufacturing procedures were changing, too. Here's how a *Detroit Post & Tribune* reporter described his 1880 visit to Parke-Davis:

"When a consignment of roots, leaves, bark or medicinal plants is received it is placed in a capacious store room until wanted for use. Then such a portion as is wanted is ground or torn into fine fragments by peculiarly constructed mills.

"It is then placed in large tanks and quantities of alcohol poured on from time to time till the whole is thoroughly soaked and reduced to a sort of pulp. While in this condition it is placed under a powerful hydraulic press, and under a pressure of from 100 to 400 tons all the medicinal juices are removed, leaving the woody residue as dry as tinder. This fluid extract is then stored away for bottling in marketable shape.

"When a solid preparation of the drug is desired for the purposes of druggists in making pills, the drug is percolated with alcohol and after exhaustion the percolate is concentrated at a low temperature to the consistency of dough or paste.

"Solid extracts are largely used in the pill department, where in other ingredients all are most thoroughly mixed. The process of sugar coating is most interesting . . . Pills are placed in a revolving pan or cylinder, and pure sugar syrup poured over them. A current of air is forced over the sticky, revolving mass, which soon separates, a thin coating of sugar adhering to each pill.

"In putting the lozenges and pills up in vials and bottles, a careful record is kept and each bottle is numbered."

Serum In 1893, when endocrine glands were beginning to assume an important role in medicine, "desiccated thyroid substance" was introduced. In 1894 Davis became keenly interested in the announcement from Europe that a serum treatment for diphtheria had been discovered.

At his insistence, the company set up facilities to produce a diphtheria serum of their own and obtained biological license No. 1 from the U.S. government. On March 18, 1895, a Detroit physician

administered a shot of Parke-Davis diphtheria antitoxin to an ailing company employee. It was the first commercially-produced serum administered to anyone in the United States. Ironically, laboratory tests later showed the patient had a strep throat rather than diphtheria.

Another important discovery came in 1895 when a Japanese scientist, Jokichi Takamine, developed Taka-Diastase, a starch-liquefying enzyme that's still used in a number of Parke-Davis products. Then in 1897 the company announced it had succeeded in standardizing a group of products by physiological assay. This process was immediately applied to those drugs which would not lend themselves to standardization by chemical assay.

End of Era Now the East began to deal with the Detroit company. Hervey C. Parke and George S. Davis finally had succeeded in establishing their company as a leader in the pharmaceutical industry. This success, however, came at the close of their careers with the firm they had struggled to establish for more than 30 years.

Davis wasn't content with the returns on his Parke-Davis investments. While Parke lived a conservative life, Davis was inclined to be on the extravagant side. He owned a huge mansion, a 500-acre dairy and stock farm, a yacht on Lake St. Clair, and a $35,000 show horse.

The aggressive little salesman had invested most of his resources in California real estate and was nearly wiped out in the Panic of 1893. Other poor investments took big bites out of his personal fortune. He desperately needed more capital and in 1896 sold his Parke-Davis holdings and left the company. Seven years later, Davis filed a petition of bankruptcy. Then the company he had helped organize awarded him a pension which continued until his death in 1930.

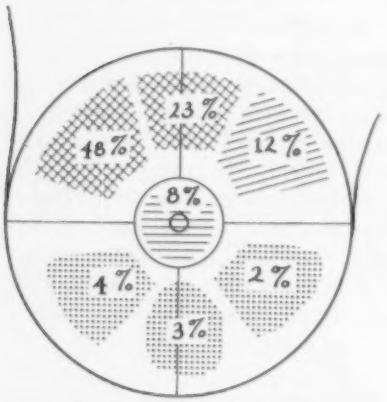
Hervey Parke continued as president for three years after Davis' retirement. Then, in 1899, the surviving founder died while on a business trip in California, and the era of Hervey C. Parke and George S. Davis as active managers of their company came to an end. Fortunately, both had remained active long enough to see the institution they had guided through shaky financial years on little more than enthusiasm and optimism mature into a worldwide enterprise.

Yet even today, when Parke-Davis has 62 branches throughout the world and a working force of more than 10,000 employees, the story is far from complete. The pharmaceutical industry, almost from its inception, has developed in direct ratio to man's demands for better medical care. As long as medicine progresses, pharmacy will progress with it. And the Parke-Davis story will have no ending.

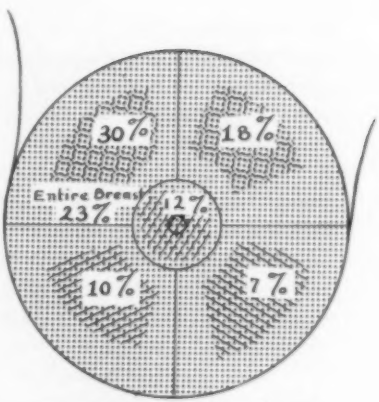
NEXT MONTH: *The story of Dr. Ernst J. Lederle, the laboratory founder who fought to free New York of disease*

Clini-Clipping

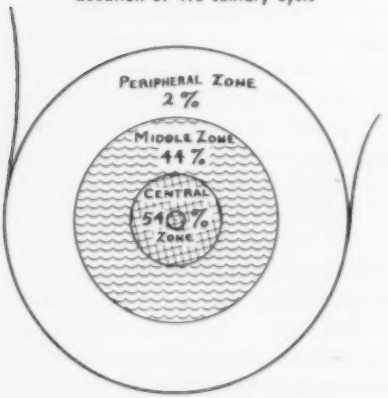
Percentage of Distribution of Mammary Tumors



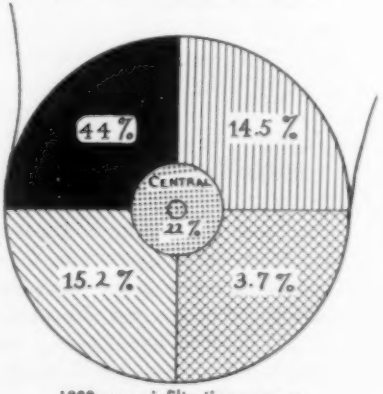
Location of 410 solitary cysts



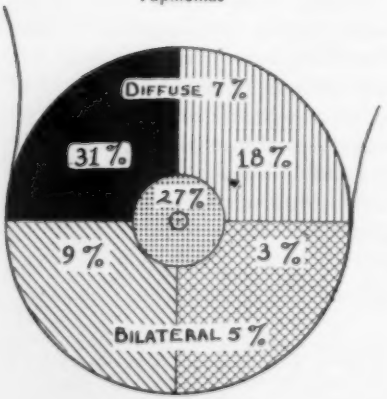
79 cases of benign fibro-adenoma



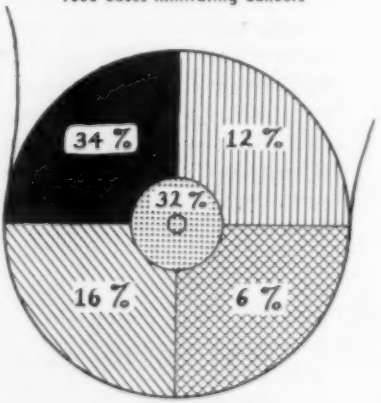
Papillomas



1000 cases infiltrating cancers



197 cases of papillary adenocarcinoma



Neo-mammary cancer

(after Geschickter)



Prepared especially for Medical Times by C. Norman Stabler, market analyst of the New York Herald Tribune

INVESTING for the Successful Physician

PENNROAD AT A DISCOUNT

Pennroad Corporation, listed on the New York Stock Exchange, is mistakenly thought to be a holding company for railroad shares. That is because it came into being in 1929 as such. It was formed by the Pennsylvania Railroad to carry certain of that company's investments, and not until 1937 did it make an investment outside the railroad field. It sells at a discount, as do the shares of certain other closed-end trusts. An investor naturally asks why?

The formula for determining whether a holding company sells at a discount is simple. You take a look at what it holds in its portfolio, evaluate these blocks of securities, deduct what it owes and then divide by the number of shares the company has outstanding.

That gives you a certain number of dollars, which represents the asset value behind each share of your stock. If your stock is selling at below that figure, it is at a discount. Once in a while the market price will exceed the asset value. Then it is selling at a premium.

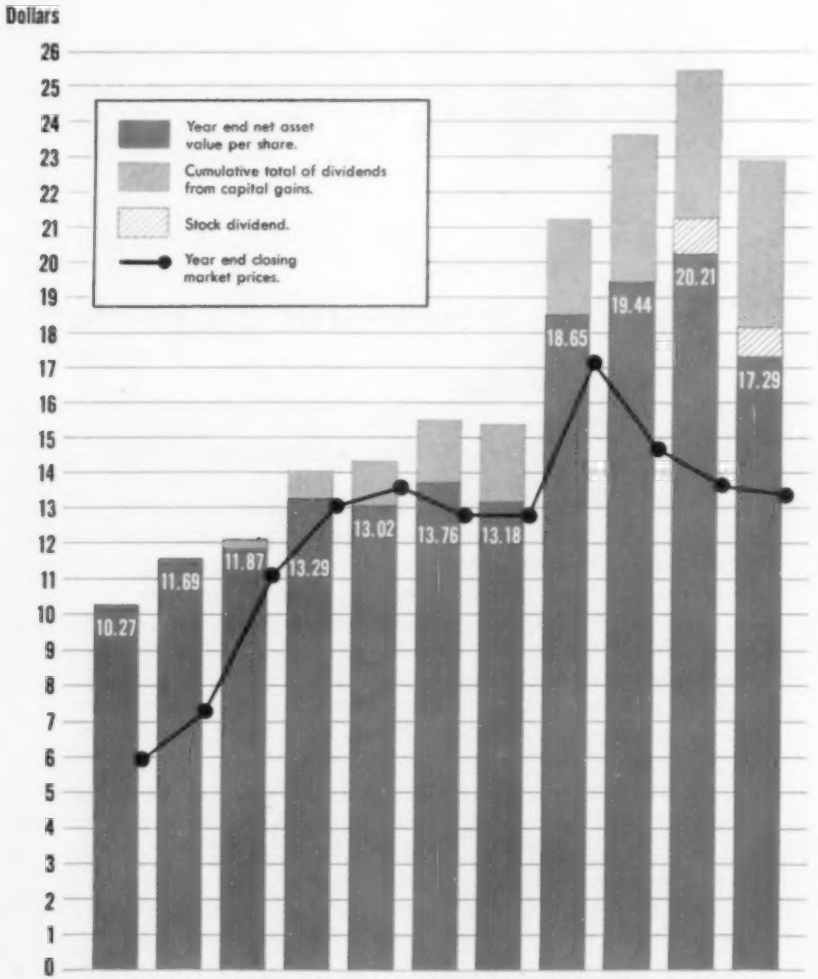
Pennroad has been selling at a considerable discount, but the margin has tended to narrow. For instance, at the beginning of 1957 it was at a 32 per cent discount. Expressed another way, that means that the shares of Pennroad, which represented a proportional interest in certain other securities, were available on the New York Stock Exchange at 32 per cent less than the market said these assets were worth.

Securities at Wholesale That doesn't sound reasonable, but it is a fact. By the end of 1957 this discount had narrowed to 23 per cent as more investors came to appreciate they were getting securities at wholesale and investment advisory services publicized the fact.

Even a 23 per cent discount however, is large. On Feb. 28 its asset value was

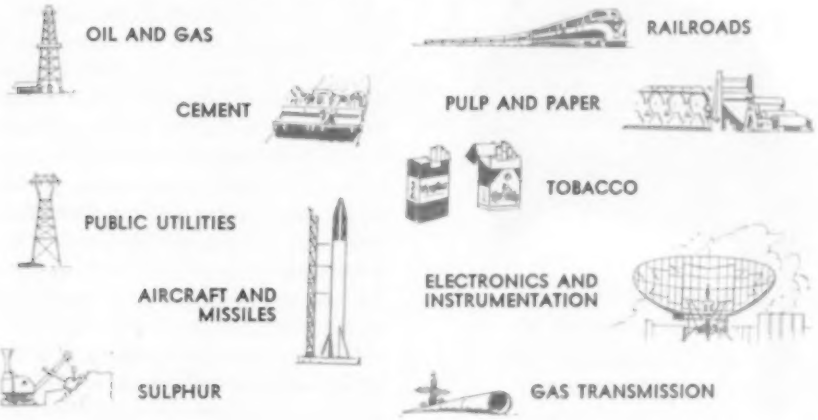
THE PENNROAD CORPORATION

10-YEAR PERFORMANCE RECORD



Dividends from:										
Net Investment Income	$0.50	$0.25	$0.50	$0.50	$0.50	$0.50	$0.50	$0.50	$0.30	$0.61
Capital Gains	–	0.25	0.50	0.50	0.50	0.50	0.50	1.50	5% in stock	0.48

GROWTH INDUSTRIES AND AREAS EMPHASIZED IN PENNROAD'S SECURITIES HOLDINGS



$17.02, a discount of 18 per cent.

One explanation, somewhat technical, may clarify this. Remember that the corporation was formed in 1929, just before the panic and the depression of the early 1930's. It had stupendous losses. As it started the long climb back, its dividends, for a period of years, were non-taxable.

This appealed to investors who were in the higher income tax brackets. Indeed Pennroad became over-valued, at least in comparison with other closed-end, non-leverage investment companies.

But its tax exemption ceased late in 1955. At that time it no longer had the appeal to the high-bracket investors that it had had earlier. Many became sellers. The result was a wilting market price that eventually put it down well below the indicated book value of its shares.

That technical consideration no longer exists. Presumably the wealthy investors, who went into it years ago as a tax shelter, have now completed their liquidation. The company's appeal, from here on in, will be to all investors, including small ones, who are looking for a well operated closed-end investment company, that is available at less than its asset value.

Pennroad's asset value declined last year but less than did the Dow Jones industrial average or the Standard & Poor's 500-stock average. In that uncertain year its management retained a significant percentage of its portfolio in public utilities, generally regarded as defensive securities in times when general business is declining.

The company's principal holdings are in the Canton Co. of Baltimore, Freeport Sulphur, Atlantic Coast Line Railroad, General Public Utilities, Orange & Rockland Utilities, Inc. and Superior Oil. Such stocks, along with a long list of smaller investments, make Pennroad an attractive equity in this market, as it has a long range appreciation potential.

PROFOUND
VASODILATION

for aching, numbness,
and blanching of
the extremities caused
by severe or acute
vasospastic disorders

ILIDAR
ROCHE

1. adrenergic blockade
sympatholytic effect
adrenolytic effect
epinephrine reversal
2. direct vasodilation
3. exceptionally well
tolerated

ROCHE—Reg. U. S. Pat. Off.

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Division of
Hoffmann-La Roche Inc
Nutley 10, New Jersey

VALUE UP, MARKET DOWN

Outguessing the market is something every investor and business man has been attempting since the beginning of time. In the mutual fund field it is essential to do just that, because an investor could select his own stocks and bonds if he chose to do so. He turns to a mutual fund because of its professional management and the diversification which it supplies. The investor has confidence the investment managers of his fund will come in with a better score than he would himself.

Last year's stock market was a sad affair and those individuals who picked their stocks on a hit or miss basis found that in most cases they missed. Stocks averaged lower, and for those managers of balanced funds—in which the money is invested in varying proportions in a selection of common and preferred stocks, and bonds—had to be nimble.

Boston Fund, one of the largest balanced funds, is among those that proudly reported for 1957 that its per share value and dividends were up in a year that the market was down.

To accomplish such a feat involves not only figuring the probable future of the stock market, but of the bond market, and the latter involves the tricky matter of interest rates. When the Federal Reserve moves to make interest charges higher, there is a decline in the market price of outstanding bonds of top quality. When interest rates are eased, then the outstanding bonds, assuming they are of the best quality, advance.

Boston Fund rightfully boasts that it sold $24,000,000 in stocks before 1957's market break, that it exchanged another $6,500,000 of high-priced stocks for more reasonably priced shares, and that

it purchased long-term bonds and preferreds with the proceeds of its stock sales when fixed-income securities were scraping their 25-year bottom before the Federal Reserve reversed its policy on interest rates.

Henry T. Vance, president of the 26-year-old mutual fund, reported that net asset value per share increased from $15.25 a year ago to $15.40 at the fiscal year end, after adjusting for a capital gains distribution of 89 cents per share paid from net profits realized during the year.

Total dividends per share from net investment income for the year also were up—amounting to 52 cents per share as compared with 48 cents for the previous year. "For those shareholders who accepted payments of last year's capital gains distribution in additional shares, this represents an increase in dividends received of more than 14 per cent," Mr. Vance said.

During the same period, he noted common stock prices in general, as measured by the Dow Jones Industrial Stock Average, declined from 479 to 450.

UP, IN SMOKE

Profits of companies in the heavier industries were extremely poor in the first quarter, as we all know, and when they total up for 1958 the chances are the comparison with 1957's results will not read too well. But in lighter industries the figures will be more pleasant. The public is willing to spend.

The tobacco industry is a direct beneficiary of this. One of the leading groups of stocks is that composed of the

PROLONGED
VASODILATION

for chronically
cold hands and feet
due to low-grade
vasospastic disease

RONIACOL
ROCHE

1. direct vasodilation
2. drug tolerance rarely develops even with long-term use
3. especially suited for older patients

ROCHE—Reg. U. S. Pat. Off.

RONIACOL®—brand of beta-pyridyl carbinol
ROCHE LABORATORIES
Division of
Hoffmann-La Roche Inc
Nutley 10, New Jersey

manufacturers of cigarettes. They are selling ex the cancer scare of a year ago, and two years ago.

United Business Service, Boston, recently predicted a further moderate improvement in earnings for most of these companies this year. It pointed out that the tobaccos, after being laggards during the long bull market, have risen since mid-1957 at a time when most stocks have shown declines. This performance is similar to the 1952-'53 experience. Cigarette consumption rose to a new high last year and profit margins widened. As a result, all the major producers were able to report increased earnings.

With the wider-margined filter brands capturing an increasing share of the market, further improvement in profits seems probable this year, the Service believes. However, gains are likely to be restrained by higher advertising expenditures as the "battle of the filters" will be expensive.

Cigarette shares may suffer occasional sinking spells from new health scare statements or Government advertising criticism. Nevertheless, the Service believe that these factors should not seriously affect 1958 sales and earnings. The cigarette equities still have appeal for their relatively liberal dividend yields.

THE BOOTSTRAP APPROACH

There is a familiar saying that a man cannot lift himself by his bootstraps. Certain of Aesop's followers however, will question this statement.

Applying their thought to business and personal affairs, they maintain that a man can make himself feel ill if he persists. He can be better if he will make a studied effort to look on the bright side and, in business, we can all do much to influence the future trend if we will think right.

It is the psychological approach. In government circles there are those who blame businessmen for singing their woes instead of hawking their wares. The thought is that if our industrial giants get melancholy enough, they will soon have a real reason for being in that sad frame of mind, and they will have done much to bring it on themselves.

We gather this is the thought prevailing in the Department of Commerce. Two officials of that government department recently undertook to chide business leaders for their long faces. They were Frederick H. Mueller, assistant secretary, and his deputy, Carl F. Oechsle. Their speeches may well have been the opening guns in a campaign to make businessmen lift themselves by their bootstraps.

Both sounded the same theme except that the Assistant Secretary flatly declared the nation is in a "recession." Mr. Oechsle talked only of an "economic readjustment" and "business breather."

Both roundly condemned "professional pessimists" who predict business will get worse before it gets better. Such people, they said, are "tax and spend" types who have nothing to offer but government controls, "make work" programs and "other socialistic type remedies."

Mr. Mueller said "nothing better could be done for the economy right now than for the articulate spokesmen of business to clear the air.

"Nothing is so convincing to the people generally as someone who believes in the future enough to put up his money to back that belief. But too often, they are fed vague generalities. "If the consuming public can see ahead far enough with no bugaboos lurking around the corners, then it is my firm belief that you will see an outpouring of risk capital and consumer spending that will lift the present record living standard in America."

DOLLAR AVERAGING

Two terms frequently heard in investment circles are dollar averaging, sometimes called dollar cost averaging, and share averaging. Both apply to that individual who has the wherewithal and the determination to invest on a regular basis.

He selects the security of his choice, and then, figuratively, takes himself by the scruff of the neck and says, "Come the first of the month and I will put so many dollars into that stock, or I will buy so many shares."

If he invests a stated number of dollars regularly, irrespective of the market value of the shares, he is dollar averaging. If he buys a stated number of shares, irrespective of the dollars involved, he is share averaging.

Both work out well over the long term, if his selection was a wise one in the first place. Think what it could have meant had he bought International Business Machines some years ago.

In dollar averaging, suppose he puts aside $100 a month. In some months that might buy five shares, in others, two. But he keeps on putting in the $100 a month. The records indicate this is a sane and sound method of saving and enhancing one's estate.

The question "when is the right time to invest?" plagues every individual. The advocate of dollar averaging would say, "Any time is the right time; but pick a sound security and then invest methodically, irrespective of bull markets and bear markets."

The theory is that no one of us is wise enough, or lucky enough, to pick a market at its low or at its high. By dol-



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- ☐ **United Science Fund**
- ☐ **United Income Fund**
- ☐ **United Accumulative Fund**
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5

lar averaging there will be times when you pay too high a price per share, but if the stock is a good one there will also be times when you buy bargains. One offsets the other.

Mutual fund men favor dollar averaging. They figure that as they offer the investor a wide diversified list, he can secure added protection if he invests on a regular basis.

Wellington Fund recently prepared a study to illustrate how dollar averaging would have worked had an investor used dollar averaging with its fund. This fund was founded in 1928. It is a balanced fund, with assets divided between common and preferred stocks, and bonds.

The figures in its table (see page 116a) cover full fifteen-year periods, since the Fund was formed, shortly befor the economic collapse of 1929. There are fourteen such full 15-year periods.

It is assumed the investors started with a $500 investment and then added $100 each month for the remainder of the period. This would bring his total cash investment to $18,400. It also assumes that all income dividends and capital gains distributions from the Fund were left in—that is re-invested in additional shares.

What do these results show? There are three basic conclusions one can safely draw. See below.

Regular investing cannot insure you of a profit, nor protect you against loss in declining markets, and it is vitally important that you choose carefully. But if you invest regularly, and if you have the patience, courage, and financial ability to keep investing despite market changes, a dollar-cost-averaging program can be a sound way to accumulate an estate without worrying about "Should I invest *now?*"

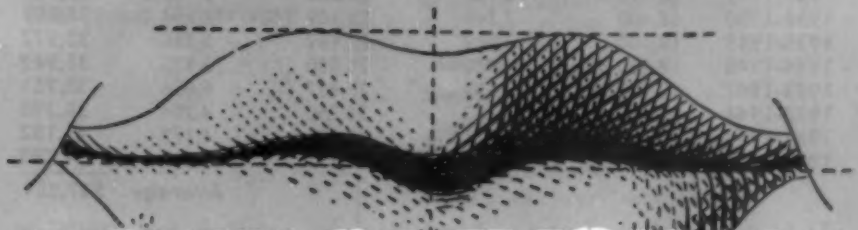
DOLLAR AVERAGING IN THE WELLINGTON FUND 1930 THRU 1957

1 Results are extremely good. To put them in perspective, if you had invested the same money at 6 per cent compounded quarterly, you would have ended up with $29,841 or $2,108 less than the lowest plan. A 3 per cent investment on the same basis would have been worth $23,253, or $14,598 less than the average plan.

2 The results are very consistent. The best plan ended at $45,538, the poorest at $31,949. All others came in between this narrow range. The turbulent thirty years encompassed the great depression, the recovery, marked political change, World War II, and the tensions of the cold war.

3 It simply didn't matter where the stock market was when the plans were started. In the 1930-1944 period, for example, the Dow Jones Average of industrial stock prices declined from 248 to 152, a drop of 39 per cent. In the 1933-1947 period, this average rose from 60 to 181, an increase of more than 200 per cent.

TASTY, FAST-ACTING ORAL FORM OF CITRATE-BUFFERED ACHROMYCIN V



ACHROMYCIN* V

TETRACYCLINE BUFFERED WITH SODIUM CITRATE

SYRUP

aqueous

ready-to-use

freely miscible

- accelerated absorption in the gastro-intestinal tract
- early, high peaks of concentration in body tissue and fluid
- quick control of a wide variety of infections
- unsurpassed, true broad-spectrum action
- minimal side effects
- well-tolerated by patients of all ages

ACHROMYCIN V SYRUP:
Orange Flavor. Each teaspoonful (5 cc.) contains 125 mg. of tetracycline, HCl equivalent, citrate-buffered. Bottles of 2 and 16 fl. oz.

DOSAGE:
6-7 mg. per lb. of body weight per day.

*Reg. U.S. Pat. Off.

Lederle

LEDERLE LABORATORIES DIVISION
AMERICAN CYANAMID COMPANY
PEARL RIVER, NEW YORK

DOLLAR AVERAGING IN WELLINGTON FUND

15 YEAR PERIOD	TOTAL INITIAL AND MONTHLY INVESTMENTS	CUMULATIVE COST OF SHARES PURCHASED THROUGH INCOME REINVESTMENT	TOTAL COST (INCL. REINVESTED DIVIDENDS)	TOTAL NUMBER OF SHARES ACQUIRED DURING PERIOD	TOTAL ASSET VALUE OF ACCUMULATED SHARES
1943-1957	$18,400	$8,417	$26,817	3,135	$36,247
1942-1956	18,400	8,734	27,134	3,305	42,932
1941-1955	18,400	8,768	27,168	3,421	45,538
1940-1954	18,400	8,758	27,158	3,537	43,509
1939-1953	18,400	8,738	27,138	3,648	36,442
1938-1952	18,400	8,804	27,204	3,783	39,500
1937-1951	18,400	8,165	26,565	3,706	37,104
1936-1950	18,400	7,749	26,149	3,694	35,127
1935-1949	18,400	7,589	25,989	3,796	33,977
1934-1948	18,400	7,480	25,880	3,925	31,949
1933-1947	18,400	7,597	25,997	4,056	33,751
1932-1946	18,400	7,850	26,250	4,204	38,390
1931-1945	18,400	7,731	26,131	4,112	41,152
1930-1944	18,400	7,395	25,795	3,911	34,299
				Average	$37,851

* Total of Capital Gains accepted in shares in these plans, respectively, from 1943-1957 to 1930-1944 were: $6,867, $6,874, $6,471, $5,963, $5,804, $5,973, $5,606, $5,403, $5,785, $6,389, $6,763, $6,962, $5,853, and $4,240.

WHAT IS FAIR TRADE?

When you see the term, "Fair Trade" in the financial section of your newspaper or favorite magazine, it means simply the principle whereby manufacturers establish a minimum resale price for their products and retailers must not violate this price. It is a principle of trade practice that is permitted in certain states, but not in all of them.

Recently there have been deflections from this so-called fair trade practice. It started with the manufacturers of small home appliances, mostly the electric ones. Manufacturers were having so much trouble with their retailers that they elected to abandon this pricing policy. It spread later to other categories of goods.

To illustrate, suppose General Electric manufactured an electric clock that it figured should retail at $8.98. Under fair trade a dealer did not dare sell for less. If he did he would be subject to legal action, which usually took the form of a court injunction restraining him from further acts of this nature. The manufacturers sought to enforce their price. General Electric, for instance, spent an estimated $500,000 to $1,000,000 annually, over the last few years, to maintain its established prices.

Last month it did an abrupt about-face, claiming that fair trade is unworkable in practice. Other manufacturers of small appliances followed, and for a while it was bargain day for housewives.

Discount houses applauded the action.

GITALIGIN STANDARDS

For Controlled Cardiac Therapy

Unusually Wide Margin of Safety [1-5]—
The average therapeutic dose of Gitaligin is only ⅓ the toxic dose, thus providing a margin of safety approximately twice as great as any other glycoside currently available.

Medium Rate of Dissipation—
rate of excretion between rapidly excreted digoxin and slowly excreted leaf or digitoxin.

Complete Absorption—
rapid and complete from gastrointestinal tract.

Uniform Potency—
constant from batch to batch.

Give all your patients with cardiac decompensation the unique benefits of the "wide safety margin" cardiotonic—

Rx

GITALIGIN®

(White's brand of amorphous gitalin)

FOR SAFE, SMOOTH, CONTROLLED CARDIAC THERAPY

White's

WHITE LABORATORIES, INC.
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Supplied:
Gitaligin 0.5 mg. tablets—bottles of 30 and 100.
Gitaligin Injection Ampule—2.5 mg. in 5 cc. sterile, I.V. solution.
Gitaligin Drops with special calibrated dropper.

Simple dosage equivalents:
It is easy to switch patients who are being maintained on other digitalis preparations to Gitaligin by substituting the equivalent daily maintenance dose of Gitaligin listed below.

0.5 mg. (1 tablet) of Gitaligin is approximately equivalent to 0.1 Gm. (1½ gr.) digitalis leaf, 0.5 mg. digoxin or 0.1 mg. digitoxin.

1. Harris, R., and Del Giacco, R. R.: Am. Heart J. 52:300 (Aug.) 1956. 2. Weiss, A., and Steigmann, F.: Am. J. M. Sc. 227:198 (Feb.) 1954. 3. Dimitroff, S. P.; Griffith, G. C.; Thorner, M. C., and Walker, J.: Ann. Int. Med. 39:1180 (Dec.) 1953. 4. Heitmanek, M. R., and Herrmann, G. R.: Texas J. M. 51:339 (May) 1955. 5. Batterman, R. C.; DeGraff, A. C., and Rose, O. A.: Circulation 5:201 (Feb.) 1952.

They had been saying all along that fair trade was archaic. They flouted the attempts of manufacturers to enforce the policy. Stephen Masters, President of a big New York discount chain, called it a "Victory of major proportions for the American shopper."

However, spokesmen for small business expressed concern that it might augur the end of the whole fair trade movement and put them in deep trouble.

A maxim in business is the bigger the operation the better it can absorb price cuts. Small businessmen like druggists, hardware dealers, jewelers and clothing merchants, say they would bite the dust if resale prices in their lines weren't fixed by manufacturers.

Fair trade in the U.S. had had a long and stormy history. There is no federal law covering it. But 31 states have fair trade statutes on their books. Fourteen others had such statutes but threw them out as unconstitutional. Missouri, Texas and Vermont and the District of Columbia never had such laws.

MOON SHINES ON MACHINES

You may not think there is any connection between the successful launching of Earth satellites or efforts to run a commuter service to the moon, on the one hand, and the business world or the stock market, on the other. But there is, we judge from a recent report from The Value Line Investment Survey.

The successful launching of the Explorer, the first American Earth satellite, was a commendable feat by the Army and a triumph for American scientists. It was a triumph as well for the missile industry.

It was also a major accomplishment for the office equipment industry, this survey notes, because it supplies the vital electronic computers.

"Without the computers," The Value Line says, "the Explorer might not even have been developed. Without the computers, the various stages of the rocket would not have performed so perfectly in flight. And without the computers, the orbit of the satellite could not be quickly tracked."

Increasing use of electronic computers by government as well as industry and science is generating heavy demand for this equipment. But, the Survey points out, expenses involved in computer research and development are extremely heavy. Profits electronic activities can hardly be expected for some time.

THAT COFFEE BREAK

There is something employees like, employers feel they have to grant, and accountants worry about. It is the coffee break, in mid-morning.

The accountant, who has to charge so many man-hours, or women-hours, has to worry about which of the firm's clients must bear the brunt. It is an expense that has to be charged somewhere.

Down in Brazil they probably say the

MY DAD— HE HURT HIS BACK REAL BAD



"It happened at work while he was putting oil in something"

"He told Mom his shoulder felt like it was on fire"

"He couldn't swing a bat without hurting"

"But Doctor gave him some nice pills--and the pain went away fast"

"Dad said we'd play ball again tomorrow when he comes home"

AND THE PAIN WENT AWAY FAST

FOR PAIN

Percodan®

(Salts of Dihydrohydroxycodeinone and Homatropine, plus APC) **TABLETS**

ACTS FASTER...
usually within 5-15 minutes

LASTS LONGER...
usually for 6 hours or more

MORE THOROUGH RELIEF...
permits uninterrupted sleep through the night

RARELY CONSTIPATES...
excellent for chronic or bedridden patients

and now... **NEW**

Percodan®-Demi

VERSATILE

New "demi" strength permits dosage flexibility to meet each patient's specific needs. PERCODAN-DEMI provides the PERCODAN formula with one-half the amount of salts of dihydrohydroxycodeinone and homatropine.

AVERAGE ADULT DOSE: 1 tablet every 6 hours. May be habit-forming. Available through all pharmacies.

Each PERCODAN-DEMI Tablet contains 4.50 mg. dihydrohydroxycodeinone hydrochloride, 0.38 mg. dihydrohydroxycodeinone terephthalate, 0.38 mg. homatropine terephthalate, 224 mg. acetylsalicylic acid, 160 mg. phenacetin, and 32 mg. caffeine.

Literature? Write

Endo **ENDO LABORATORIES**
Richmond Hill 18, New York

*U.S. Pat. 2,628,180


new...
FUROXONE
LIQUID

wide-range nitrofuran controls
the "problem pathogens" of

bacterial diarrheas and enteritis

FUROXONE®

brand of furazolidone

LIQUID

antibacterial
demulcent
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A finely divided suspension containing Furoxone, 50 mg. per 15 cc., with kaolin and pectin ■ Pleasant orange-mint flavor ■ For patients of all ages (may be mixed with infant formulae; passes through a standard nursing nipple).

■ Perorally effective against a wide range of enteric bacteria[1,2]—including common pathogenic species and strains of Escherichia, Salmonella and Staphylococcus not adequately controlled by antibiotics and sulfonamides.

■ Bactericidal rather than bacteriostatic.

■ Does not induce development of significant bacterial resistance, nor predispose to monilial or staphylococcal overgrowth.

■ No toxicity reported.
Mild sensitization, nausea, emesis occur occasionally.

Supplied in bottles of 240 cc.
Also available: FUROXONE Tablets, 100 mg. scored, bottles of 20 and 100.

1. Ponce de Leon, E.: Antibiotic Med. & Clin. Therapy 4:816, 1957.
2. H. W. McFadden and M. M. Musselman: Personal communication to Eaton Laboratories.

NITROFURANS A unique class of antimicrobials Products of Eaton Research
Eaton Laboratories, Norwich, New York

coffee break is a mucho bueno American custom. Food purveyors in the United States might be expected to say the same thing, except —.

The "except" is that a coffee break in the offing has tended to deter hard-working boys and girls from eating a nutritious breakfast. In place of a hearty morning meal there may be a tendency to sleep another ten or fifteen minutes and then show up in the office, groggy, to watch the clock until the time arrives.

Sidney Maduff, an official of the National Egg Foundation, Chicago, tells us that studies have established the fact that the man or woman who eats a hearty breakfast is much more efficient than his co-worker, who skips it. He adds that nutrition experts agree that the amount a man can accomplish during a day depends pretty much on what he eats the first thing in the morning.

He assures us he is opposed to the coffee-break as such, but he thinks a good base of bacon and eggs (the latter should be printed in bold face type), cultivates a habit among employees that will make them healthier and of more value to their employers.

"How much a workman can produce each day is determined by the type of breakfast he eats," Mr. Maduff says. "To skip breakfast and grab coffee in the middle of the morning does not begin to replenish the blood sugar which determines how much energy the body can produce."

The coffee break has mushroomed in recent years. Now more than 70 per cent of the nation's factory, office and store workers are permitted a coffee break, compared with only 49 per cent in 1950, the Pan American Coffee Bureau estimates.

The Bureau says about 27 million workers take advantage of the coffee break, consuming almost 50 million cups a day. Many firms also make pastry available at the morning break. Mr. Maduff says this is all well and good for employee morale and relaxation, providing it is not used as a substitute for breakfast.

"Studies by nutrition experts at several universities and the Department of Agriculture show that coffee time cannot be a substitute for breakfast.

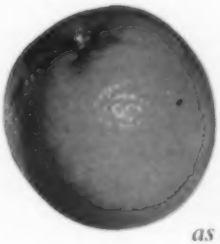
"The Agriculture Department tested 200 volunteers who ate various types of breakfast to see how much energy and efficiency they derived from each. The worst showing was observed in the typical 'quick-coffee-swallowed-on-the-run' group," Mr. Maduff adds.

He notes that production men seeking to increase productivity would do well to observe the eating habits of employees before they arrive on the job.

A WELL CHAINED NATION

Those among us with memories that run back three decades or more can remember when chain stores were unpopular in various State legislative halls. The argument was they took money out of the home community to enrich silk-hatted Wall Street promoters. But the idea persisted, as we all know.

Chain Store Business Guide, an affiliate of "Chain Store Age," reports that the latest count of noses among the food chains with two or more stores shows



there's no juice like citrus juice

as a high-potency source of vitamin C, citrus juice is unmatched in convenience and economy

Vitamin C recommendations for peak intakes



of adolescence or pregnancy



(100 mg. per day)* are supplied by 

(7-9 fl. oz.)

of citrus juice. But it takes 

of apple juice, or 

of grape juice, or 

of pineapple juice, or



of prune juice to supply this amount of vitamin C.†

* During lactation Recommended Daily Allowance for vitamin C is 150 mg.; for normal adults, 70-75 mg.

Florida Citrus Commission, *Lakeland, Florida*

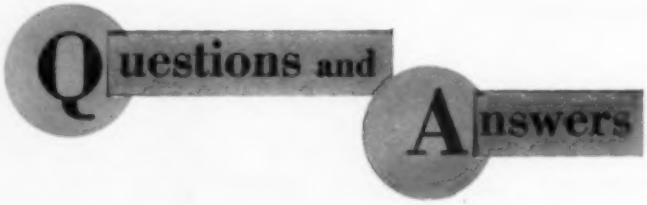


† Data calculated from: Watt, B. K. et al., U. S. Dept. Agric. Handbook No. 8, 1950; and Burger, M. et al., Agr. & Food Chem. 4:418, 1956.

there were 26,747 such units in the U. S., and 1,438 in Canada last year.

In the United States total, 3,125 food chains operated 19,757 supermarkets doing better than $10,000 a week. There are 875 food chain supermarkets in Canada.

While the chains' volume was $21,500,000,000 in 1957, the estimated portion of this in supermarkets was $19,350,000,000, or 90 per cent of the total. The average volume of the 19,757 food chain supermarkets was $980,000 a year, or about $19,000 a week.



On occasion our readers ask what we think of Buttonhole Plastics, United Independent Whatsall, Universal Stemwinder or other pets. This column seeks to give an appraisal, assuming of course, that the inquirer knows that if we had all the answers we would soon own "Medical Times" and would regard Long Island as our private country estate.

It is possible however, to appraise specific industry and corporate developments. Within the realm of financial data made available by the companies themselves, and from informed opinion in the financial community, we supply readers with considered comments.

With that thought in mind we present a few questions and answers.

Q. *I have noticed the advance in Polaroid. Statistically speaking it has no right to sell so high, considering its earnings and its dividends. What goes on here?*

A. If uppermost in your mind is earnings per share or dividend yield, don't buy Polaroid. I have held it for some years and presumably I will for some time to come. The company impresses me because of its exceptionally high-grade research and the fact that it is virtually a monopoly in the picture-a-minute industry. In a stock of this nature you must expect a high price/earnings ratio, and a low yield. It is doing well with the earnings it is plowing back to finance its future. Polaroid has a large short interest. I'd rather be long than short of this one.

Q. *Years ago I owned selected shares in the packing industry, but then I sold out. Do you have any recommendations in this field?*

A. Congratulations on having sold out, because the packing industry, as important as it is, has not done well by its stockholders in recent years. As for a specific selection, Wilson & Co. has a certain amount of promise. It has been doing somewhat better with its profit margins and we look for a moderate improvement in its per share earnings.

But surely... the lady will be dainty

- Massengill Powder has a "clean" antiseptic fragrance. It enjoys unusual patient acceptance
- Massengill Powder is buffered to *maintain* an acid condition in the vaginal mucosa. It is more effective than vinegar and simple acid douches.
- Massengill Powder has a low surface tension which enables it to penetrate into and cleanse the folds of the vaginal mucosa.
- Massengill Powder solutions are easy to prepare. They are nonstaining, mildly astringent.



massengill® powder *when recommending a vaginal douche*

INDICATIONS:

Massengill Powder solutions are a valuable adjunct in the management of monilia, trichomonas, staphylococcus, and streptococcus infections of the vaginal tract. Routine douching with Massengill Powder solution minimizes subjective discomfort and maintains a state of cleanliness and normal acidity without interfering with specific treatment.

Currently, mailings will be forwarded only at your request. Write for samples and literature.

The S. E. MASSENGILL Company BRISTOL, TENNESSEE
NEW YORK SAN FRANCISCO KANSAS CITY

In modern feminine hygiene

and therapy

massengill® powder

The clean, refreshing fragrance of Massengill Powder is acceptable to the most fastidious for therapeutic or routine hygienic use. Solutions are easily prepared, convenient to use, nonstaining. They effectively cleanse, deodorize and soothe the vaginal mucosa, while their mild astringent properties tend to decrease vaginal secretions.

CLEAN-UP AFTER ANTIBIOTICS

Following intensive antibiotic therapy, many female patients complain of vulvar pruritus or vaginitis, and profuse vaginal discharge. Most of these present the classical picture of Monilia albicans, Trichomonas vaginalis or mixed infections. When these infections occur, regular use of Massengill Powder, with its pH of 3.5 to 4.5, helps restore the normal acidity of the vaginal tract. At this normal pH the growth of pathogenic organisms is inhibited and the growth of the normal vaginal flora encouraged.[1]

LOW pH RETENTION

Massengill Powder is buffered to retain an acid condition. In a recent study, ambulatory patients—with an alkaline vaginal mucosa resulting from pathogens—maintained an acid vaginal mucosa of pH 3.5 for a period of 4 to 6 hours after douching with Massengill Powder; recumbent patients maintained a satisfactory acid condition up to 24 hours. Simple acid douches are quickly neutralized by an alkaline vaginal mucosa, and are unsatisfactory in maintaining the required acid pH of the vagina.[2]

LOWER SURFACE TENSION

Massengill Powder in the standard solution has a surface tension of 50 dynes/cm. as compared to that of water and simple acid solutions with 72 dynes/cm. This added property enables Massengill Powder to penetrate into and cleanse the folds of the vaginal mucosa, thus increasing the therapeutic effectiveness. Lowered surface tension makes the cell wall and cytoplasmic membrane of the infecting organism more permeable and more susceptible to specific therapy.[2]

SUPPLY

Massengill Powder is supplied in glass jars of the following sizes:

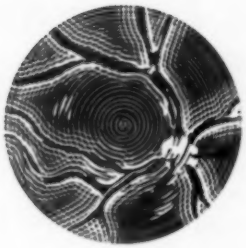
Small, 3 oz.
Medium, 6 oz.
Large, 16 oz.
Hospital Size, 5 lbs.

Pads of douching instructions for patient use available on request.

REFERENCES

1. Lang, W.R., Rakoff, A.E., Am. Geriatrics Soc. *1*:520 (1953).
2. Arnot, P.H., The Problem of Douching, Western Journal of Surg., Obs., and Gyn., Vol. 62, No. 2:85 (1954).

The S. E. MASSENGILL Company BRISTOL, TENNESSEE NEW YORK SAN FRANCISCO KANSAS CITY





in severe essential or malignant hypertension

to reduce blood pressure and control symptoms

When 30 patients with hypertensive diseases of varying severity received Methium with Reserpine, 76.6% showed a significant fall in both standing and supine blood pressure. Under treatment for an average of 14 months, nearly all experienced marked symptomatic improvement. Blood pressure reduction was achieved and maintained on " . . . less than half the usual daily requirement of either drug."*

In this combination the ganglionic blocking action of Methium appears to be potentiated by the central vasodepressive effect of reserpine, leading to "...clinically smoother and more satisfactory blood pressure reduction."*

Because lower dosages of each drug are required when used in combination, side effects from Methium with Reserpine occur rarely and are usually mild. Optimal dosage is safely established through gradual increases.

* REFERENCE:
Crawley, C. J. *et al*: N. Y. State J. of Med. 55:*23* (Dec.1) 1955: pp. 3461-3463.

Methium® with **Reserpine**

(brand of hexamethonium chloride)

WARNER-CHILCOTT

Q. *Would you care to express an opinion on International Harvester?*

A. Its farm implement sales, with the exception of tractors, have been satisfactory. It is difficult to wax enthusiastic about companies in this field of endeavor. As for the stock, its dividend appears reasonably safe, and it offers a good yield. Harvester has a proud name. Presumably this field must recover some time, and it should get its share of the business, even though that business is slow in making an appearance.

Q. *I have a good profit in Gulf Oil and I wonder if you think I should take it and run.*

A. I have always liked Gulf's management, especially in the last few years. The company displayed industry leadership last month when it issued a statement on crude oil prices. I don't know the immediate future of oil company shares, but if you like the industry you aren't gambling too much if you go Gulf.

Q. *Would you express an opinion on Singer Manufacturing?*

A. This company conducts an international business and it has every reason to know what foreign competition means. Recently it has had top management changes and the drive is to revitalize its operations. It has acquired a half interest in a Japanese concern, a former competitor. As for the stock, the yield is good, the risks are many, but the chances are the new management will give you a good run for your money.

Q. *An organization with which I am connected has held Burroughs for some time and we are wondering if we should sell it.*

A. Burroughs is an aggressive concern. Probably the first quarter earnings will be its poorest for this year. The company has run into heavy expenses in connection with getting its Sonsitronic machine under way. As a guess Burroughs should reach its breakeven point around midyear, and as you already own it, our suggestion is you wait for the good news instead of selling on the bad.

Q. *I have a loss in Allied Chemical & Dye and am wondering whether to take it and switch into something else.*

A. Allied has cost its recent followers plenty, but remember it is one of the big chemical concerns, and that industry has no nearby horizons. On the basis of recent prices, Allied appears to be conservatively priced. Perhaps one reason for its present low price is that it has been financing expensive expansion projects. We suspect the market has discounted this. I would'nt sell it short.

Q. *Do you have any pertinent information on Bell & Howell?*

A. Its sales and earnings outlook for this year is favorable. As a long term holding it appears to be a safe risk. The introduction of new products has improved its speculative appeal, and it is

The information set forth herein was obtained from sources which we believe reliable, but we do not guarantee its accuracy. Neither the information nor any opinion expressed constitutes either a recommendation or a solicitation by the publisher or the authors for the purchase or sales of any securities or commodities.

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supplied: 5-mg. and 2.5-mg. scored tablets, bottles of 30 and 100.

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in an industry that ignores depressions. Our opinion is that we like it.

Q. *What would you do about Ex-Cello?*

A. I wouldn't do anything. The outlook is for a moderate decline in sales this year, although certain lines, like its milk-packaging business, are looking better. For this conservative investor the answer is we think there are better cows in the pasture.

THE BUSINESS OUTLOOK

Everyone is guessing on the probable future of the business trend. In the opinion of a leading economist, Thurston P. Blodgett, chief economist for Tri-Continental Corporation, one of the largest closed-end investment companies, most guesses are too optimistic. He thinks the recession will last longer than most forecasts indicate. Thus he crosses with President Eisenhower, among others, who looked for the bottom to be touched in March.

Mr. Blodgett notes that in the 1953-'54 recession it required seven months of stabilization before the trend turned upward. He believes we can expect business activity to remain on a lower level at least as long, or probably longer, after the current decline terminates. On the other hand he foresees no sharp depression, but more "a readjustment period, of the nature of the 1953-'54 recession."

Addressing the Cleveland Society of Security Analysts recently Mr. Blodgett said that those who forecast a mid-year upturn are basing their expectations heavily on the prospect of increased consumer buying.

"There is no historical evidence that the consumer will be the active force bringing the recession to an early end," he declared. He added that he is satisfied consumer demand, rising unemployment, heavy installment debt, and the unlikelihood that stepped-up government spending will do more than sustain current sales, all combine to rule out an early upturn in the economy.

"One difference favorable to the present readjustment period is increased government expenditures as against a decline in 1953-'54," he said. "However, the effect of this program is not expected to be felt for several months."

Guide For Investors

Based on recommendations of the Securities and Exchange Commission in cooperation with the New York Stock Exchange, American Stock Exchange, National Association of Securities Dealers and others.

1. Think before buying, guard against all high pressure sales.
2. Beware of promises of quick spectacular price rises.
3. Be sure you understand the risk of loss as well as prospect of gain.
4. Get the facts—do not buy on tips or rumors.
5. Give at least as much thought when purchasing securities as you would when acquiring any valuable property.
6. Be skeptical of securities offered on the telephone from any firm or salesman you do not know.
7. Request the person offering securities over the phone to mail you written information about the corporation, its operations, net profit, management, financial position and future prospects.

"In our opinion, the most effective drug used in ulcerative colitis during recent years is Azulfidine."

D. J. Sandweiss and M. H. Sugarman: "What is new in the treatment of ulcerative colitis." J. Michigan State Med. Soc. 55:1461 (Dec.) 1956.

"The most valuable drug that has been introduced for the treatment of ulcerative colitis in the years that I have been interested in this problem is salicylazosulfapyridine."

J. A. Bargen: "The management of patients with ulcerative colitis", Med. clin. North America 1956 (March) p. 541.

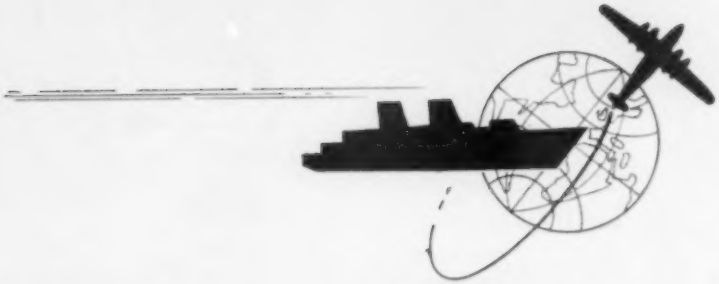
Azulfidine

BRAND OF SALICYLAZOSULFAPYRIDINE

"Azulfidine is the drug of choice for ulcerative colitis."

L. E. Nelson: "Present-day concepts of the treatment of ulcerative colitis," Minnesota Med. 40:552 (Aug.) 1957.

PHARMACIA LABORATORIES, Inc., 501 Fifth Avenue, New York 17, N.Y.



Prescription for TRAVEL

Your Trip Abroad

SECOND OF A SERIES

Once you've decided to take the family to Europe and have figured out what you want to do and see, you've got to come to grips with two factors—time and money.

You are the best authority on the amount of time you can afford to take away from your practice. By flying it's possible to squeeze a European vacation into two weeks. (Many do it.) But it goes without saying that the more time you have at your disposal, the more satisfying your experience will be. You don't want to wear yourself out following a hectic schedule.

How much the trip will cost depends on a number of things, but suffice it to say that if you go "first class" all the way and concentrate your activities in the big cities and other popular tourist haunts, it will cost you a tidy amount.

By making compromises here and there (without sacrificing any real comfort) you will pay a lot less and get even more pleasure out of your trip. You can't get the real feeling of a country if you spend all your time in plush hotels and restaurants and never meet the average citizen.

Fares The biggest single outlay will be for transatlantic fares. Sea fares vary according to the line and ship. At this writing these are the *minimum* New York-Southampton one-way summer fares quoted for one of the more popular luxury liners: first class, $355; cabin, $230; tourist, $190.

One-way air fares from New York to London are: deluxe, $485; first class, $435; tourist, $315; economy, $252.

In either case, whether by air or sea, children under 12 go for half fare.

To ascertain current costs in Europe, your journal sent questionnaires to the tourist boards of a number of countries.

Dealing with prices, especially those for meals, is apt to be a tricky proposition. Prices given here are indicative, not precise. In general, the quoted hotel rates are average for the range within each room classification.

Though the latest available, all of the price information which follows is subject to change.

—Continued on page 132a

Noludar

will put your patient

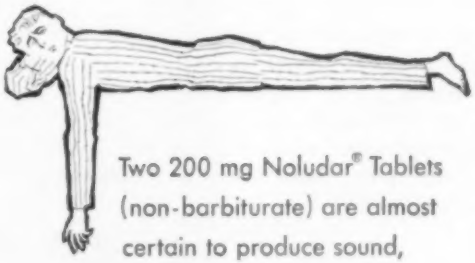
to sleep



and he will not awaken

with that knocked out

feeling



Two 200 mg Noludar® Tablets (non-barbiturate) are almost certain to produce sound, restful sleep. One 200 mg tablet is frequently adequate.

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc
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Noludar®—brand of methyprylon—non-barbiturate sedative-hypnotic

GREAT BRITAIN

Hotels Single per day: luxury, $12 and up; first class, $9 and up; medium priced, $5 and up; outside of London, $4. (In each case breakfast is included.)

Meals In London: lunch, $1.50; medium priced dinner, $2.50; luxury dinner (with wines) $11. Outside of London: medium priced dinner, $1.60; lunch, $1.

Transportation By rail: first class, 3.5 cents per mile; second class, 2.3 cents per mile. Rental for 4-passenger car: $4.90 per day plus 6 cents a mile for any distance exceeding 60 miles.

Tipping In restaurants figure 10 to 15 percent, the higher rate in the more plush establishments. Hotels: 10 per cent of bill should be divided among staff who have given personal service. Porters: 15 cents for one suitcase; for a number of pieces, 7 cents for each.

Shopping Best buys: antiques, silverware, leatherware, clothing. Some typical prices: men's shoes, $12; men's suits, from $60; women's cashmere cardigans, from $19.

TO OUR READERS: You are avid travelers—as statistics show—taking trips for pleasure and relaxation as well as to attend professional meetings in this country and abroad. In addition, you often prescribe travel for your patients. Thus, the purpose of this department is to give you concise, practical information about one of your strong interests—travel. As a special service, this section will carry each month a calendar of important forthcoming national and international medical meetings.

GERMANY

Hotels Double rooms per day: luxury, $12.50; medium priced, $8; outside of cities, $4.

Meals Breakfast, from 30 to 90 cents; lunch, from 60 cents to $2.50; dinner, from 60 cents to $4.

Transportation By rail: first class, 4.5 cents per mile; second class, 3 cents per mile. Bus: somewhat less than second class train fare. Taxis in cities: 20 cents plus 20 cents per mile. Rental of self-drive 4-passenger car: $2.20 per day plus 5 cents per kilometer (kilometer equals five-eighths of a mile).

Tipping City hotels charge 15 percent service fee. For meals, hotels and restaurants add 10 per cent for service; in restaurants it is customary to round off total so that waiter gets something extra. Bellboys get from 12 to 24 cents for carrying luggage. Chambermaids not tipped except for special services or if you stay longer than two days—50 cents per week.

Shopping Best buys: cameras, microscopes, china, toys, glassware, fine steel ware, surgical instruments. Optical goods are about 35 percent less than New York prices; china, toys, crystal, etc., about half of prices in U.S.

FRANCE

Hotels The price structure is a complex affair, there being five classes of hotels, from the deluxe down to what are called "1 star." And within the single hotel there usually are three different classes of rooms. In prices quoted you have to figure additional amounts for taxes and a 15 percent serv-

—Continued on page 134a



Natabec
Kapseals

VITAMIN-MINERAL COMBINATION

Just one NATABEC Kapseal a day provides vitamin-mineral supplementation for the gravida and for the nursing mother. Prescribed by the physician as a supplement to good table fare, NATABEC helps to promote better present and future health for the mother and for her child.

dosage: As a supplement during pregnancy and throughout lactation, one or more Kapseals daily. Available in bottles of 100 and 1,000.

PARKE, DAVIS & COMPANY
Detroit 32, Michigan

she
needs support, too
during pregnancy
and throughout
lactation

TRAVEL (continued from 132a)

ice charge. Four star double, $10; three star, $6.50.

Meals Luxury dinner, $10; moderate priced, $2.

Transportation Rental for 4-passenger car: $5.40 per day plus 4 cents per mile for distance exceeding 36 miles (this is on a 7-day rental basis).

Tipping The French Tourist Office gives this sensible advice: "You are generally safe in following the same procedures you would follow at home." However, here are a few additional guides: If service charge is not included in hotel and restaurant bills, tip at a rate of from 12 to 15 percent. Porters get about 15 cents per bag, taxi drivers about 20 percent of fare.

Shopping Best buys: lace, pottery, clothing, porcelain, crystal. Most stores will give discounts if payment is made in U.S. travelers checks.

SWITZERLAND

Hotels Double room per day: luxury, $12 and up; medium priced, $8 and up; outside main tourist areas, $4 and up.

Meals Breakfast, 75 cents; lunch, $1-1.50; medium priced dinner, $1.50; luxury dinner, $4.

Transportation Rental for self-drive 4-passenger car: $5.40 per day plus 5 cents each kilometer. Taxis in cities: 23 cents plus 12 cents per kilometer.

—Continued on 136a

How to

help prevent diaper rash



REFINED (TO ENSURE QUALITY) BENZALKONIUM CHLORIDE

ZEPHIRAN® CHLORIDE

In diapers rinsed with Zephiran chloride, urea-splitting bacteria – the "trouble makers" – are inhibited. Ammoniacal decomposition is retarded, and a deodorant effect produced as well. Just give your patients these simple instructions:

Wash diapers in the usual manner and rinse thoroughly in water to ensure removal of all soap. Add 1 teaspoon of Zephiran chloride concentrate solution 12.8% to 2 quarts of water (= approximately 1:3000 solution). Use this Zephiran solution as a final rinse and dry as usual. This ensures a sterile diaper. Patients' instruction cards available to physicians and nurses on request.

Supplied: Concentrate (12.8% buffered aqueous solution) in 4 oz. and 1 gal. bottles; as tincture 1:1000, tinted, or stainless, and as aqueous solution 1:1000 in 8 oz. and 1 gal. bottles.

Note: Zephiran is nonirritating and virtually nontoxic in proper dilution. It is a real economy, too.

Winthrop LABORATORIES, NEW YORK 18, N. Y.

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on the problem of antibiotic-resistant bacteria



A POINT OF VIEW IN '55 "At this time, it appears that the problem of antibiotic-resistant bacteria is the greatest fear in the future with chronic infections of the . . . urinary tract . . ."[1]

A POINT OF FACT IN '58 ". . . This prediction has proved to be correct for both gram-positive and gram-negative organisms."[2]

. . . WITH ONE NOTABLE EXCEPTION ". . . studies indicate that microorganisms, in vitro and in vivo, do not appear to develop resistance to FURADANTIN."[3]

for acute and chronic urinary tract infections

FURADANTIN®

brand of nitrofurantoin

AVERAGE FURADANTIN DOSAGE: In acute, complicated or refractory cases and in chronic infections—100 mg. q.i.d., with meals and with food or milk on retiring.

REFERENCES: 1. Flippin, H. F.: Virginia M. Month. 82:435, 1955. 2. Caswell, H. T. et al.: Surg. Gyn. Obst. 106:1, 1958. 3. Nesbitt, R. E. L. Jr., and Young, J. E.: Obst. Gyn., N. Y. 10:59, 1957.

NOW, for hospitalized patients, for severe urinary tract infections when peroral administration of FURADANTIN is not feasible and for serious infections as septicemia (bacteremia): **FURADANTIN** *Intravenous Solution*



NITROFURANS . . . a *new* class of antimicrobials . . . neither antibiotics nor sulfonamides

EATON LABORATORIES, NORWICH, NEW YORK

TRAVEL continued from 134a

Tipping Ten to 15 percent is the general rule. When service charge is included in hotel bill or restaurant check, it isn't necessary to give more unless you feel the service was exceptional.

Shopping Best buys: watches, typewriters, textiles, sports equipment, embroideries and other native handicrafts. Watches run about 30-40 percent less than in U.S.

HOLLAND

Hotels Double per day: first class, about $7, medium priced, about $4.50. (Breakfast usually included.)

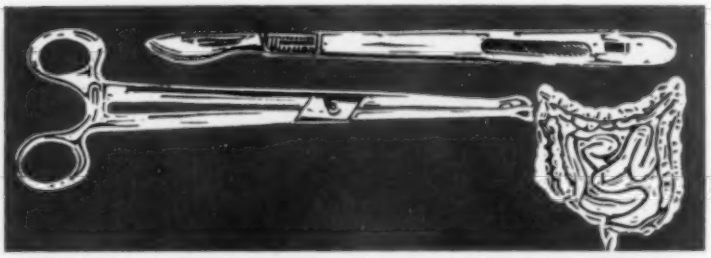
Meals Breakfast, 50 cents; lunch, 50 cents to $1; dinner, from $1.20 to $2.40, with special dishes such as lobster higher.

Transportation By rail: Typical second-class fare—roundtrip from Amsterdam to The Hague (66 miles), 4.25 guilders ($1.12). Taxis in cities: available at relatively low rates.

Tipping In general, hotels and restaurants charge 15 percent for service; snack bars, 10 percent. Taxi drivers get 10 percent.

ITALY

Hotels Once again we come up against a complex structure with a number of classes, from luxury down to fourth class. Some typical prices for



SULFASUXIDINE®

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A "STANDARD" IN BOWEL SURGERY

Many years of widespread use have demonstrated the importance of SULFASUXIDINE in bowel surgery. It minimizes the danger of infection by producing a low bacterial count in the gut and reduces incidence of flatulence. Normal healing is encouraged.

Available as 0.5 Gm. tablets in bottles of 100 and 1000; powder form in 1-pound bottles.

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Announcing

SIGMOL® ENEMA

non-irritating • sodium-free

is now available through ethical prescription pharmacies

Physicians who have used this NEW disposable enema in hospitals across the nation have asked us to make it available to their patients for home use.

Sigmol Enema contains, in each 120 cc. (4 fluid oz.)

Sterilized Solution, N.F.	43 Gm.
Dioctyl Potassium Sulfosuccinate	0.12 Gm.

Safe, even for routine use with patients on low-sodium regimen.

For your supply of handy patient instruction sheets, write SIGMOL on your Rx blank and mail to:

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double rooms in Rome: luxury, $9 to $16; first class, $6 to $13; second class, $4.50 to $8. These rates do *not* include the 18 percent service charge or tax fee. According to the Italian Tourist Office, prices for hotel rooms in smaller cities run about 10 percent less.

Meals Breakfast, 40 cents; lunch, $1.50 to $2; medium dinner with wine, $3 to $5; deluxe dinner, $5 to $10.

Transportation Rental for car from $8 to $20 per day, depending on type and size; discounts when used for periods over 30 days. Taxis in Rome: Starting rate of about 20 cents with meter adding 3.2 cents every two minutes or 280 metres.

Tipping In hotels it is customary to give small tips to chambermaids, porters and bellboys each time you get service. This is in addition to service charge. Restaurants: service charge, but waiters expect tip of from 16 to 50 cents for good service. Taxi drivers: 15 percent of fare with minimum of 16 cents.

Shopping Best buys: jewelry, ceramics, handbags and other leather goods, glassware, laces, antiques.

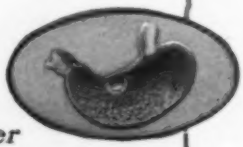
SPAIN

Hotels Per person per day: deluxe, $3.50 to $6; first class "A", $2.50 to $6; first class "B", $2 to $6. (Service charge of 15 percent is included in rates. Double rooms cost 18 percent less than twice single rates.) Country hotels usually charge the same as first class "B" hotel.

—Continued on page 140a

SATISFACTORY REDUCTION OF GASTRIC SECRETION. Each patient has wide physiological and emotional tolerances to anticholinergics. Malcotran's wide dosage latitude facilitates regulation of your patient's dosage *according to his need, not his tolerance.*

Malcotran assures prompt arrest of gastro-intestinal motility — and reduction of gastric secretion.



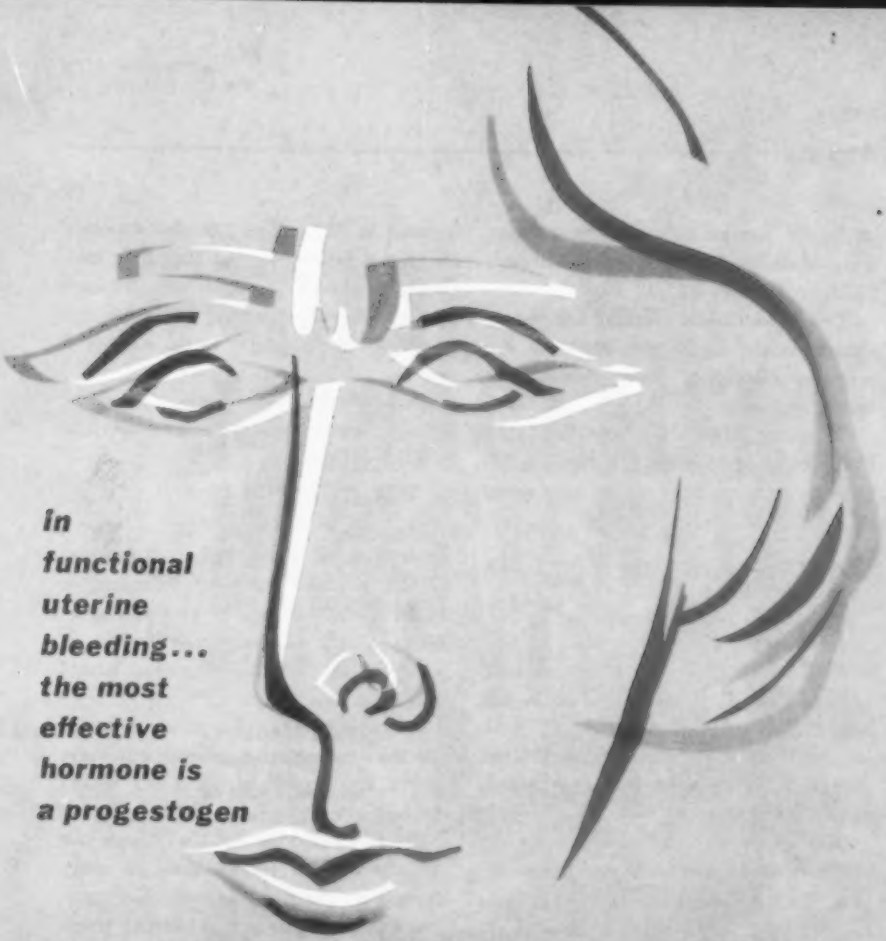
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for peptic ulcer

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in functional uterine bleeding... the most effective hormone is a progestogen

NORLUTIN™

(norethindrone, Parke-Davis)

oral progestogen with unexcelled potency and unsurpassed efficacy

Functional uterine bleeding is usually due to failure of ovulation with sustained estrogenic stimulation of the endometrium in the absence of progesterone. Administered orally, NORLUTIN produces presecretory to secretory and marked progestational endometrium in 3 to 14 days.[1-3] Return of normal menstruation frequently can be induced by continued cyclic therapy with NORLUTIN during successive months.

CASE SUMMARY[3] A 44-year-old woman had spotting and bleeding for 10 days. She was treated with NORLUTIN, 10 mg. twice daily for 4 days. Bleeding stopped during medication and 24 to 72 hours after cessation of therapy normal withdrawal bleeding occurred.

INDICATIONS FOR NORLUTIN: conditions involving deficiency of progesterone such as primary and secondary amenorrhea, menstrual irregularity, functional uterine bleeding, endocrine infertility, habitual abortion, threatened abortion, premenstrual tension, and dysmenorrhea.

PACKAGING: 5-mg. scored tablets (C. T. No. 882), bottles of 30.

REFERENCES: (1) Greenblatt, R. B., & Clark, S. L.: M. Clin. North America, Philadelphia, W. B. Saunders Company (Mar.) 1957, p. 587. (2) Greenblatt, R. B.: *J. Clin. Endocrinol. & Metab.* *16*:869, 1956. (3) Hertz, R.; Waite, J. H., & Thomas, L. B.: *Proc. Soc. Exper. Biol. & Med.* *91*:418, 1956.

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0179M

Meals Restaurants also come under three classifications. Cost of dinner: $2.10 or $1.80 or $1.50.

Transportation Rental for 4-passenger sedan: $5.50 per day plus 8.5 cents per kilometer. Rates go down for longer periods.

Tipping About 10 percent for taxis. Porters get 3 *pesetas* per bag (38.95 pesetas to $1). You are also expected to give a peseta or two to movie and theater ushers, doormen, etc. Though service charge is added to restaurant checks, it is customary to tip another 5 percent.

Shopping Best buys: antiques, jewelry, leather goods, woolens, sporting goods, perfumes.

Seeing Europe by Car

Touring by car for at least part of your European vacation is one way to leave the crowds behind. With an auto you can forget about a strict timetable and linger in areas which especially appeal to you. And while you're at it you can save money by stopping at country inns and hotels.

- Taking your own car: This pays only if you plan a stay of at least six months. Ship car as excess baggage; rates vary according to weight. If car weighs from 2501 to 3500 pounds, round-trip costs $400; if between 3501 and 4500 pounds, $475.

- Hiring a car: This is economical and handy. A typical car-hire plan in Britain, for example, would cost $4.90 per day plus 6 cents a mile for any distance exceeding 60 miles. This is for a self-drive four-passenger sedan. Rate includes insurance.

- Buying a car: If you plan to stay between two and six months, this plan proves economical. Key feature is that dealer agrees to repurchase car at a predetermined fixed price. According to the British Travel Association, it would cost about $430 to own and operate an $1820 car for three months in Britain. This includes insurance, plates and other fees.

According to the American Automobile Association, the general minimum age in Europe for hiring a car is 21; the minimum age for a driver's license is 18. For $1.50 the AAA will issue you an international license good in every European country except Germany. There you have to have a German translation of your home state driver's license.

Whether you're interested in buying a car or hiring one, you should make all arrangements before leaving this country. Your travel agent, the AAA or the representative of a European car maker can give you detailed information and expedite your automotive plans.

Motels Three dozen motels are now scattered along the principal tourist routes of Europe, and scores more are under construction. According to a survey by Pan Am Airways, prices are lower than at big city hotels, averaging $4 per person for room, bath, garage and breakfast.

—Continued on page 142a

FOR YOUR

TOTAL MANAGEMENT OF HYPERTENSIVE PATIENTS

to relieve pressures in your patients

to relieve pressures on your patients



rely upon

RAUDIXIN

"the best symptom reliever"

Squibb Whole Root Rauwolfia Serpentina

"We are in firm agreement with Wilkins who states that Rauwolfia* is the best symptom reliever. It relieves anxiety and tension, particularly the tension headache of the mild hypertensive patient, better than any other drug. It lowers blood pressure and slows the pulse much more efficiently than the barbiturates. It is not habit forming and is synergistic with all other known hypotensive agents."

Finnerty, F. A. Jr.: New York State J. Med. 57: 2957 (Sept. 15) 1957.

Raudixin—Whole Root Rauwolfia—"is often preferred to reserpine in private practice because of the additional activity of the whole root."

Corrin, K. M.: Am. Pract. & Dig. Treatment 8:721 (May) 1957.

Dosage: Two 100 mg. tablets once daily; may be adjusted within a range of 50 to 300 mg. daily. Supply: 50 and 100 mg. tablets, bottles of 100, 1000 and 5000.

SQUIBB

Squibb Quality—the Priceless Ingredient

*RAUDIXIN® IS A SQUIBB TRADEMARK.

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Many of these roadside hostelries reflect the design and regional charm of the countries in which they are located. A Danish motor court near Odense, for example, is a four-winged farmhouse with ultra-modern accommodations. A motel six miles outside Paris offers a sun deck above the Seine. Several motels in Great Britain resemble Tudor inns with beamed ceilings, fireplaces and generously applied dark wood paneling.

Others, like their American counterparts, offer such extras as television, push-button kitchens and sun patios. A brand-new motel outside of Rome has 32 units spread out on the side of a hill. A deluxe central building with restaurant, a pool and golf course are other special features.

MEDICAL TIMES

Calendar of Meetings

May

Paris, France: Congress of French Society of Ophthalmology, May 11-15. *Contact:* Dr. Guy Offret, 16, Rue de Logelbach, Paris, France.

Brussels, Belgium: Conference of International Union for Health Education of the Public, May 3-4. *Contact:* Mr. M. Lucien Viborel, Secretary-General, 92, Rue St. Denis, Paris, France

Munich, Germany: Congress of the International Association for the Study of the Bronchi, May 16-17. *Contact:* Dr. J. M. Lemoine, 189, Boulevard St. Germain, Paris 7e, France.

June

San Francisco, Calif.: American Medical Association Annual Meeting, June 23-27. *Contact:* Dr. George F. Lull, 535 N. Dearborn St., Chicago 10, Ill.

Halifax, N. S., Canada: Canadian Medical Association, June 15-19. *Contact:* Dr. A. D. Kelly, 150 St. George St., Toronto 5, Ontario.

Montreal, Canada: Congress of International Federation of Gynecology and Obstetrics, June 22-28. *Contact:* Prof. L. Gerin-Lajoie, 1414 Rue Drummond, Suite 313, Montreal, Canada.

Lisbon, Portugal: International Association for Child Psychiatry, June 15-20. *Contact:* Mrs. Irvine, Secretary-General, Tavistock Clinic 2, Beaumont St., London, W. 1, England.

Stockholm, Sweden: International Congress of Urology, June 25-July 1. *Contact:* Dr. G. Giertz, Karolinska Sjukhuset, Stockholm 60, Sweden.

July

Stockholm, Sweden: American College of Surgeons, Regional Meeting,

—Continued on page 146a



to help you and to help the new mother . . .

Ask your
Wyeth Territory Manager
for the

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INFANT
FEEDING
SERVICES

"Your Baby Book"
"Modern Infant Feeding"
"Instructions for Care of Mother and Baby"
Mother's Gift
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FOOD FORMULA FOR INFANTS
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for sound
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This advertisement conforms to the Code for Advertising of the Physicians' Council for Information on Child Health.



The fingertip derives its sensitivity from nerve endings that make up the anatomy of touch. These include the Pacinian, Ruffini's and Meissner's corpuscles. This tactile apparatus helps surgeon, diagnostician, sculptor and musician exercise their complex skills.

THE ANATOMY OF TOUCH

"Built-in" *sensitivity* identifies every RAMSES® unexcelled rubber prophylactic. RAMSES are preferred by many men because their transparency, smoothness and demonstrable thinness contribute to retention of natural sensitivity. Yet they are amazingly strong.

Many physicians now specify prophylactics routinely to prevent husband-wife re-infection. ". . . Trichomonas vaginalis in the male is the principal factor of re-infection in the female. . . ."[1] The husbands cooperate more readily in your treatment plan when you acquaint them with RAMSES, the prophylactic with "built-in" sensitivity.

1. Feo, L. G., et al.: J. Urol. 75:711 (April) 1956.



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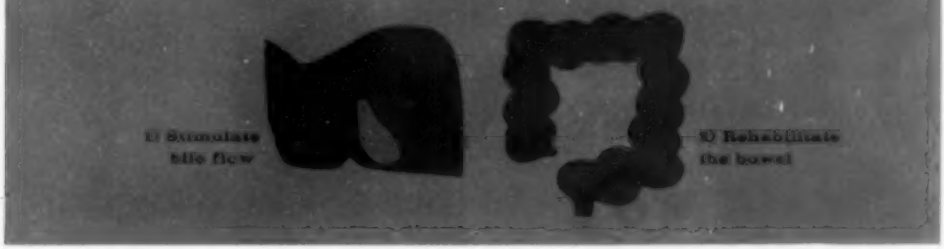
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choleretic-bowel corrective

Senobile™ TABLETS

Standardized concentrate of total active senna pod principles and dehydrocholic acid, **Purdue Frederick**

DOSAGE: 1-2 tablets at bedtime. **SUPPLY:** Bottles of 60 and 30 tablets.

1-34 Complete bibliography available on request.

*Krantz, J. C., Jr., Carr, C. J.: Pharmacologic Principles of Medical Practice, 3rd ed., Williams & Wilkins Co., Baltimore, 1954, p. 376.

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July 2-7. *Contact:* Dr. Michael L. Mason, 40 E. Erie St., Chicago, Ill.

London, England: International Cancer Congress, July 6-12. *Contact:* Secretary-General, 7th International Cancer Congress, 45, Lincoln's Inn Fields, London, W. C. 2, England.

Birmingham, England: British Medical Association, July 10-18. *Contact:* The Secretary, British Medical Association, Tavistock Square, London, W. C. 1, England.

London, England: British Tuberculosis Association, July 1-4. *Contact:* Secretary-General, National Association for the Prevention of Tuberculosis, Tavistock Square, London W. C. 1, England.

London, England: Congress of Medical Women's International Association, July 15-21. *Contact:* Dr. Janet Aitken, 30 a Acacia Rd., London, N. W. 8, England.

London, England: International Union of Biological Sciences, July 16-23. *Contact:* Chairman, Division of Biology and Agriculture, National Research Council, 2101 Constitution Ave., N. W., Washington 25, D. C.

August

Montreal, Canada: International Congress of Genetics, August 20-27. *Contact:* Mr. J. W. Boyes, Chairman, Department of Genetics, McGill University, Montreal 2, Quebec, Canada.

Stockholm, Sweden: International Congress of Microbiology, August 4-9. *Contact:* Dr. C. G. Heden, Bakteriologiska Institutionen, Karolinska Institutet, Stockholm, Sweden.

Copenhagen, Denmark: World Federation of Occupational Therapists, August 11-16. *Contact:* Annemarie Gjetting, Upsalagade 7,S.S., Copenhagen, Denmark.

Copenhagen, Denmark: World Medical Association, August 15-20. *Contact:* Dr. Louis H. Bauer, 10 Columbus Circle, New York 19, N. Y.

September

Brussels, Belgium: International Association for the Prevention of Blindness, September 8-15. *Contact:* Dr. J. P. Bailliart, 47 Rue de Bellechasse, Paris 7e, France.

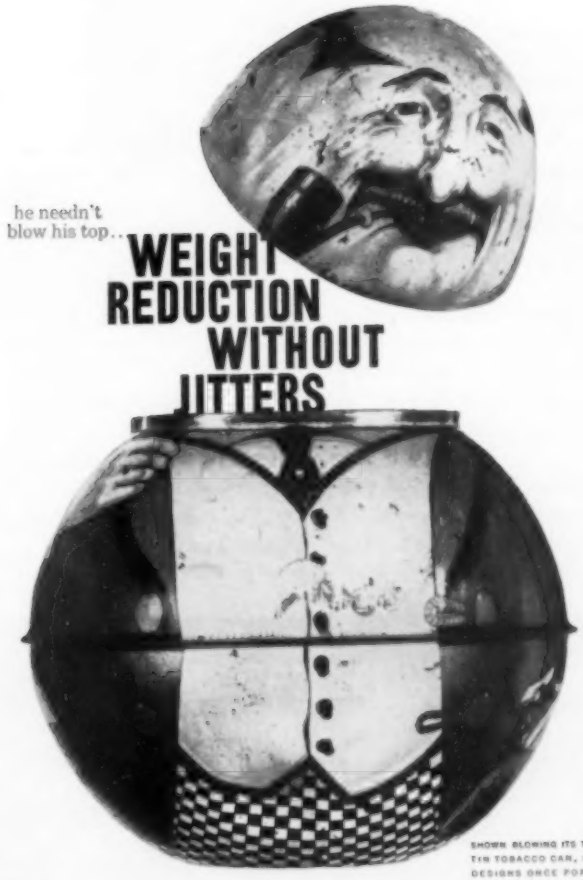
Venice, Italy: International Congress of Angiology and Histopathology, September 25. *Contact:* Dr. L. Gerson, 4 Rue Pasquier, Paris 8e, France.

Vienna, Austria: International Congress of Biochemistry, September 1-6. *Contact:* Dr. O. Hoffmann-Ostenhof, Währingerstrasse, 42, Vienna IX, Austria.

Tokyo, Japan: International Congress on Diseases of the Chest, September 7-11. *Contact:* Prof. Andrew L. Banyai, Council on International Affairs, American College of Chest Physicians, 112 E. Chestnut St., Chicago, Ill., U. S. A.

Montpellier, France: International Congress on the History of Medicine,

—Concluded on page 148a



he needn't blow his top..

WEIGHT REDUCTION WITHOUT JITTERS

SHOWN BLOWING ITS TOP IS A COLLECTOR'S TIN TOBACCO CAN, ONE OF MANY SUCH DESIGNS ONCE POPULAR IN AMERICA.

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Weight Reduction: Obese patients may resist weight reduction because they fear losing the emotional security involved in overeating. AMBAR Extentabs or Tablets help them hold the diet line by giving them a more alert, brighter outlook. AMBAR adds incentive to weight reduction, gives the patient a better chance of holding off the disabling effects of continued overweight.

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Methamphetamine hydrochloride	3.33 mg.
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September 28-Oct. 2. *Contact:* Dr. F. A. Sondervorst, 124 Avenue des Allies, Louvain, Belgium.

Beirut, Lebanon: International Congress of Hydatid Diseases, September 12-15. *Contact:* Dr. Elias Sader, Rue Ibrahim Ahdab, Beirut, Lebanon.

Brussels, Belgium: International Congress of Ophthalmology, Brussels, Belgium, September 8-12. *Contact:* Prof. Jules Francois, 15 Place de Smet de Naeyer, Ghent, Belgium.

Barcelona, Spain: International Congress of Psychotherapy, September 28-Oct. 2. *Contact:* Dr. Mariano de la Cruz, Clinica Psiquiatrica Universitaria, Faculty of Medicine, Barcelona, Spain.

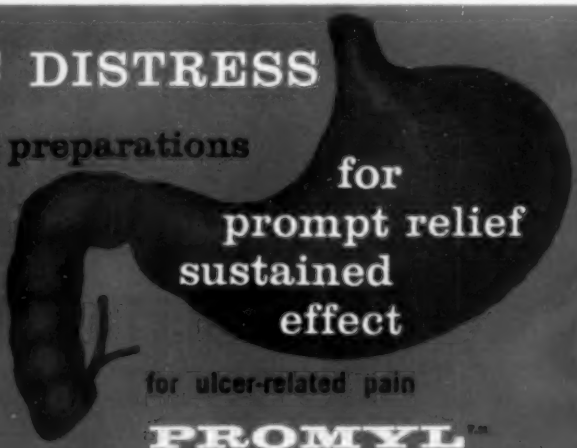
Lisbon, Portugal: International Congress of Tropical Medicine and Malaria, September 5-13. *Contact:* Prof. Manuel R. Pinto, Instituto de Medicina Tropical, Lisbon, Portugal.

Brussels, Belgium: International Society of Cardiology, September 14-21. *Contact:* Dr. F. van Dooren, 80 Rue Mercelis, Brussels, Belgium.

Rome, Italy: International Society of Hematology, September 7-13. *Contact:* Dr. Sol Haberman, 3500 Gaston Ave., Dallas, Tex., U. S. A.

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2 new, original preparations



for prompt relief sustained effect

for hyperacidity

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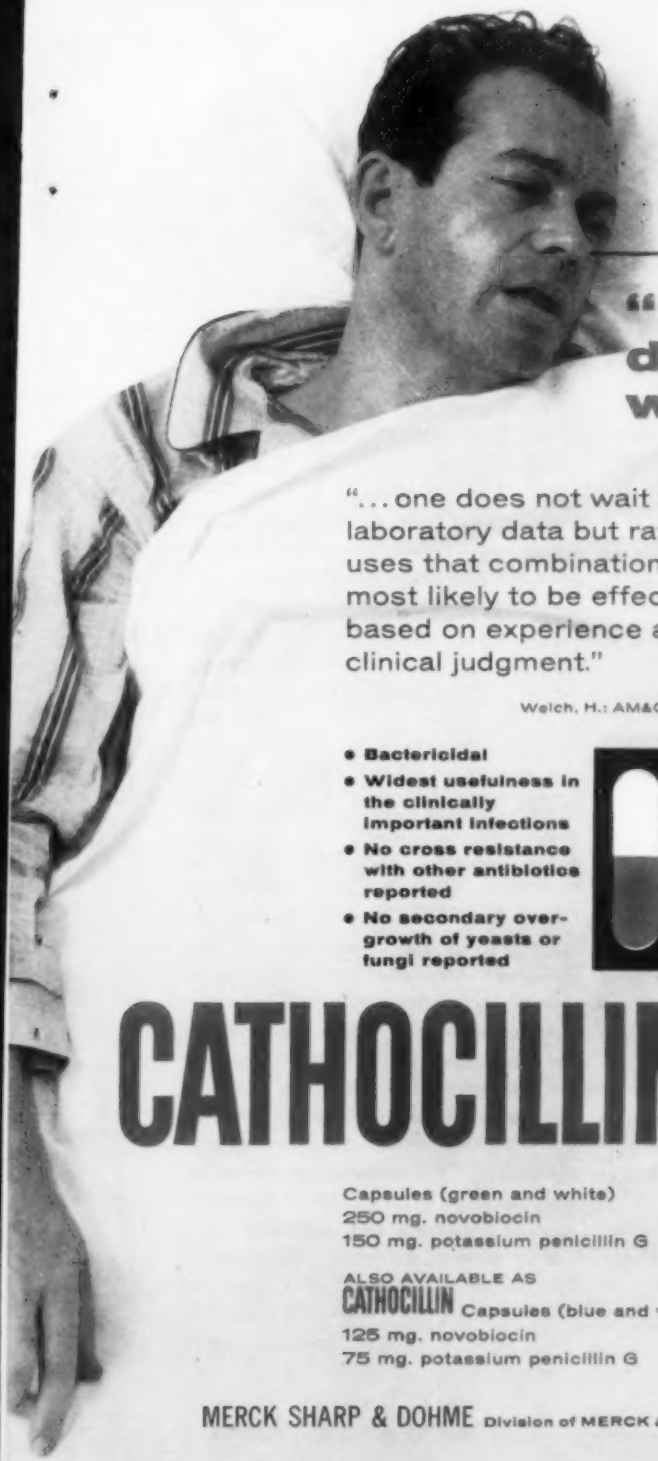
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for ulcer-related pain

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"...one does not wait..."

"...one does not wait for laboratory data but rather uses that combination most likely to be effective, based on experience and clinical judgment."

Welch, H.: AM&CT 3:375 (Nov.) 1956

- **Bactericidal**
- **Widest usefulness in the clinically important infections**
- **No cross resistance with other antibiotics reported**
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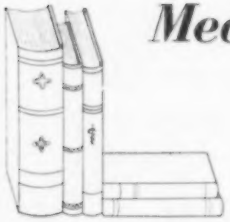
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250 mg. novobiocin
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Medical Book News

Edited by
Robert W. Hillman, M.D.

Sports Medicine

Sports Injuries Manual for Trainers and Coaches. By Donald F. Featherstone. New York, Philosophical Library, [1956]. 8vo. 132 pages, illustrated. Cloth, $6.00.

This practical manual has been prepared especially for the non-medically qualified trainer or coach. The author is a well known British physiotherapist with a wide experience in taking care of injured athletes. After opening chapters dealing with the anatomy of the musculo-skeletal system and the rudiments of human physiology as particularly related to sports, there follow chapters on the duties of a coach, prevention of sports injuries, and the methods of treating them.

MAYER E. ROSS

Pediatric Cardiology

Pediatric Cardiology. By Alexander S. Nadas, M.D. Philadelphia, W. B. Saunders Company, [c. 1957]. 8vo. 587 pages, illustrated. Cloth, $12.00.

The author has prepared an excellent handbook for the general physician, pediatrician, and medical student.

The volume is divided into four parts. The first part entitled, "Tools of Diagnosis," includes chapters on physical diagnosis, radiology of the heart, electro-cardiography, phono-cardiography, cardiac catheterization, and angiocardiography.

Part Two is reserved for acquired heart disease such as rheumatic heart disease, myocardial diseases, pericardial diseases, congestive heart failure, and miscellaneous diseases.

Congenital heart disease comprises the third part. The experience gained by the author in the diagnosis, treatment and follow-up of more than 500 such cases at the Children's Hospital and the Children's Medical Center in Boston forms the basis of the discussion.

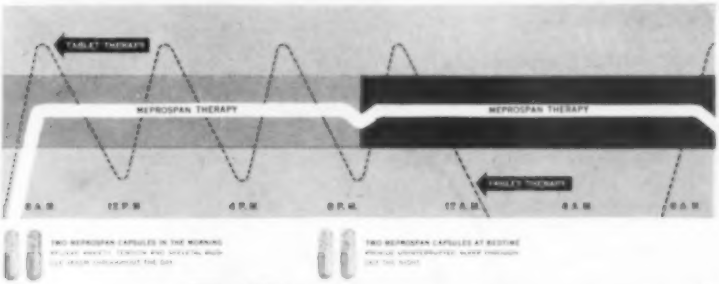
The topic of the fourth part is "Anesthesia for Children with Heart Disease." Written by Dr. Robert M. Smith, Chief Anesthesiologist of the Children's Medical Center, Boston, it carefully outlines for anesthetists the types of anesthesia which are liable to be safest in given circumstances and for the pediatrician—the physician who is most often called upon to evaluate the readiness of the child to undergo anesthesia — the essential psychological and physical prerequisites for endurance of anesthesia and operation.

This book is eminently recommendable to the practitioner who wants to

—Concluded on page 155a

New...
meprobamate prolonged release capsules

Evenly sustain relaxation of mind and muscle 'round the clock



TWO MEPROSPAN CAPSULES IN THE MORNING

TWO MEPROSPAN CAPSULES AT BEDTIME

Meprospan*

MEPROBAMATE IN PROLONGED RELEASE CAPSULES

- maintains constant level of relaxation
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Dosage: Two Meprospan capsules q. 12 h.
Supplied: Bottles of 30 capsules.
Each capsule contains:
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2-methyl-2-n-propyl-1,3-propanediol dicarbamate

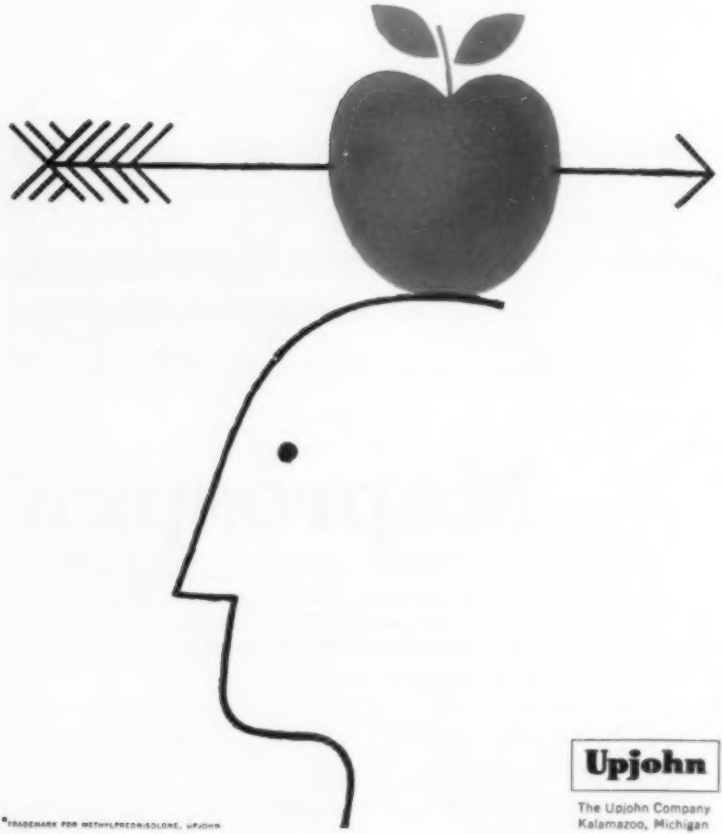
Literature and samples on request.

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the corticosteroid that hits the disease,
but spares the patient



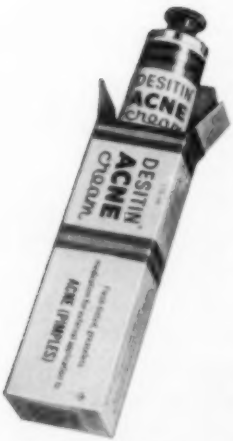
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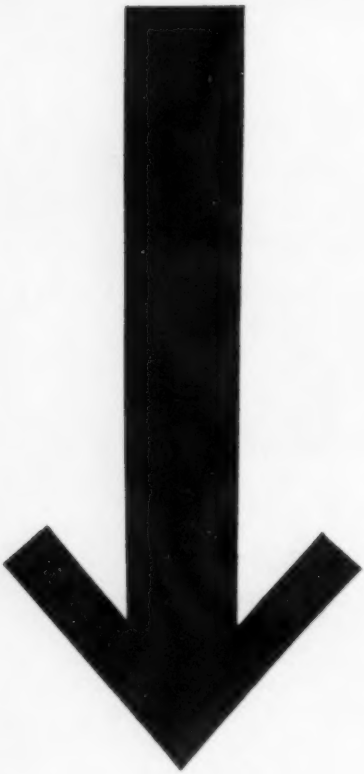
- **conceals lesions without medicated or mask-like appearance, thereby facilitating constant usage without embarrassment of patient.**
- **moderate keratolytic action with reduction of excess oiliness without local irritation.**
- **combats secondary infection of comedones and pustule formation.**

Combines colloidal sulfur, resorcinol, zinc oxide and hexachlorophene in a flesh-tinted, quick-drying, cosmetically elegant and superior base. Safe, pleasant to use, greaseless.

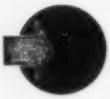
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812 Branch Ave., Providence 4, R. I.

1. Bleiberg, J.: J. Med. Soc. New Jersey, Aug. 1957.
2. Weissberg, G.: Clinical Medicine, Feb. 1958.



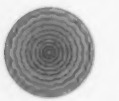
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*Unique encapsulation of millions of minute oil globules by Irish moss assures complete penetrant diffusion in stools.

IN CONSTIPATION

TO SOFTEN STOOLS WITHOUT TISSUE DEHYDRATION AND MAKE THEM MOVE WITHOUT STRAINING

KONDREMUL®

COLLOIDAL EMULSION OF MINERAL OIL AND IRISH MOSS patch

PROVEN SAFE...EFFECTIVE • IN PREGNANCY • IN CHILDHOOD • IN MIDDLE-AGED PATIENTS • IN ELDERLY PATIENTS • **THROUGH MORE THAN 25 YEARS OF USE**

AVAILABLE in three pleasant-tasting formulas:

for the average patient
KONDREMUL (Plain)
containing 55% mineral oil. Bottles of 1 pint.

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KONDREMUL WITH CASCARA
0.66 Gm. non-bitter Ext. Cascara per tablespoonful.
Bottles of 14 fl.oz.

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KONDREMUL WITH PHENOLPHTALEIN
0.13 Gm. (2.2 gr.) phenolphthalein per tablespoonful.
Bottles of 1 pint.

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70 YEARS OF SERVICE TO THE MEDICAL PROFESSION

MEDICAL BOOK NEWS

—Concluded from page 150a

brush up his knowledge of heart disease in children.

KENNETH G. JENNINGS

Orthopedics

The Postural Complex. Observations as to Cause, Diagnosis and Treatment. By Laurence Jones, M.D. Springfield, Illinois, Charles C. Thomas, [c. 1955]. 4to. 156 pages, illustrated. Cloth, $9.75.

Dr. Jones presents a theory that pronation of the feet produces a tilt of the pelvis and exaggerates existing curvature of the spine and thereby produces neuralgias of the entire spine and/or extremities.

The text is divided into four parts:—The first deals with postural change and evolutionary adaptations.

Part two deals with the causes of various disorders of the human body and the mechanical factors responsible. This chapter is well illustrated to explain the author's theories but most complex to comprehend.

Part three deals with physical examination and postural history. It is well illustrated but completely inadequate.

Part four deals with treatment. It contains detailed instruction in proper shoes and necessary corrections to overcome the many neuralgias in the trunk and extremities.

Your reviewer does not believe that most orthopedists will accept a postural theory of pronated feet as the basic cause of back pain.

This book should not be used for other than reference.

HENRY P. LANGE



IN THE MANAGEMENT OF URINARY TRACT INFECTIONS YOU CAN BE SURE WITH ®

SUROMATE

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NEW TRIPLE SULFA WITH THE DOUBLE PLUS

EACH TABLET CONTAINS:

Sulfadiazine	100 mg.
Sulfomerazine	100 mg.
and	
Sulfacetamide	100 mg.
+ Ext. Hyoscyamus (alkaloids 0.155%)	5.75 mg.
+ Potassium citrate	200 mg.

SUPPLIED: Bottles of 100 tablets.

Superior, broad-spectrum antisepsis. Highly soluble, rapidly absorbed, maintains high g.u. concentrations. Effective in low dosage with minimal risk of crystalluria, sensitization, resistance or superinfection.

Prompt antispasmodic and anti-irritant relief of pain and urgency.

Diuresis and alkalization to enhance sulfonamide solubility and safety.

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MODERN THERAPEUTICS

Emotional Disturbances Treated with Prochlorperazine

Being familiar with the favorable results from the use of prochlorperazine (Compazine) mostly when used as an antiemetic, the author, L. G. McAfoos, Jr., of Collingswood, New Jersey, *Diseases of the Nervous System* [*18*:430 (1957)], decided to evaluate the drug as a therapeutic measure when treating anxiety and the other emotional disturbances frequently encountered by the general practitioner. Fifty-two patients whose chief symptoms were headache, pre-cordial pain, insomnia, anorexia, epigastric distress, and nonspecific musculo-skeletal pains and who could be classed diagnostically as suffering from anxiety, depression, and psychophysiologic reactions comprised the group selected for study. All patients were started on a 5-mg. tablet of procholorperazine three times daily. The dosage was subsequently individualized to maintain a calm, relaxed state without undue sedation; usually this required 5 mg. of Compazine four times a day. Midway in the study, eleven patients were given 15 mg. of the drug in sustained release Spansule capsules to be taken once a day. The duration of treatment, using both methods, ranged from three to sixteen weeks. Forty-four members of the group responded favorably to prochlorperazine: results were considered excellent in 17; good in 22; and fair in five. Side effects were negligible. Patients with anxiety reactions appeared to be helped most by prochlorperazine. All experienced symptomatic relief, and showed progress in adjusting to their environment. Patients with psychophysiologic reactions responded favorably in the main, although the benefit was not immediate. In some instances, the favorable response was not apparent for three weeks or more. Compazine proved highly effective with patients in the geriatric group; according to the author, "helping old folks who felt lonely, isolated and inadequate was a difficult task made less difficult." Depressed patients were greatly benefited; they slept better, had more initiative, and felt more sociable. According to the author, Compazine appears to be as effective as similar-acting drugs in managing mild to moderately disturbed patients, and its freedom from the usual untoward reactions is advantageous, particularly in the treatment of ambulatory patients.

Neomycin in the Treatment of Hepatic Coma

"Eight patients with cirrhosis and chronic portal-systemic encephalopathy and 12 patients with acute hepatic coma were treated with neomycin sulphate 4-10 g. daily from ten hours to ten months.

"Six chronic patients showed pronounced clinical benefit, which was associated with a fall in the fasting arterial-blood-ammonium level and an im-

—Continued on page 158a

In Upper Respiratory Tract Infections . . .

for symptomatic relief and
prevention of bacterial complications

PEN·VEE·*Cidin*®

Penicillin V with Salicylamide, Promethazine Hydrochloride, Phenacetin, and Mephentermine Sulfate, Wyeth

Wyeth
®
Philadelphia 1, Pa.



Supplied: Capsules, bottles of 36. Each capsule contains penicillin V, 62.5 mg. (100,000 units); salicylamide, 194 mg.; promethazine hydrochloride, 6.25 mg.; phenacetin, 130 mg.; mephentermine sulfate, 3 mg.

antibacterial
analgesic
antipyretic
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INVITATION
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ASPIRIN-LIKE ANALGESIC & ANTIPYRETIC

DROPSPRIN®

Prescribe DROPSPRIN wherever and whenever the patient will not or cannot swallow aspirin tablets. Especially convenient for infants, children and geriatric patients for whom tablet medication is difficult.

DROPSPRIN is a pleasantly flavored milky suspension containing 1 gr. salicylamide per each 1cc. DROPSPRIN is completely miscible with water, milk or fruit juices. DROPSPRIN may be used for "active q.s.'ing" in place of inert syrups or elixirs in order to add degrees of analgesia.

Indications and dosage:
Same as for aspirin.

Supplied: **Bottles—1 oz. and 2 oz. with dropper calibrated at 0.5cc. and 1.0cc.**

Samples and literature available upon request

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—Continued from page 156a

provement in the electro-encephalogram. 1 patient relapsed after ten months' treatment. Fetor hepaticus was abolished in 6 of 7 chronic patients.

"The fasting arterial-blood-ammonium level rose gradually under treatment with neomycin.

The effect on the stool flora was variable and could not be correlated with the clinical benefit or with the fall in arterial-blood-ammonium level.

Purgation induced a partial remission in 2 patients but was not so effective as neomycin.

"Seven of 12 patients with acute hepatic coma showed initial improvement, but other forms of treatment were used simultaneously.

"Neomycin treatment had to be stopped in 2 patients owing to severe diarrhoea."

by A. M. Dawson, Jannet McLaren, and Sheila Sherlock
The Lancet, No. 7008, Vol. II

Prolonged Treatment of Urinary-Tract Infections with Sulfamethoxypyridazine

"Antibacterial concentrations of free sulfonamide were maintained in the serum and urine with a single oral dose of 0.5 gm. daily for prolonged periods. Adverse reactions were observed in 6.4 per cent of patients during the first course of treatment.

"A favorable clinical response was observed in 80 per cent of patients with acute infections and 24 per cent with chonic infections. Bacteriologic cure was achieved in 21 per cent of the

—Continued on page 160a



A choice diet
for the patient
plus Lysine
equals earlier
convalescence

"Shortage of an essential amino acid in the *food* means a shortage of protein in the body."[1] Protein loss is greatly increased during injury, surgery, disease or illness — and the deficiency will progress steadily unless a proper diet is achieved. But appetites seem to lag when they are most necessary, because patients are suffering from pain, anorexia or poor gastrointestinal function. At best they will eat *only* soft cereal products.

Many investigators have shown that "lysine deficiency is the salient lack in the cereal grains."[2] The biologic value of cereal protein can be improved to almost double its tissue building value by the addition of adequate quantities of *lysine* to the accepted diet.

Assure efficient reconstructive nutrition with

Cerofort® tablets

(Critically essential L-lysine with therapeutic amounts of all important vitamins)

The recommended daily dose of 3 Cerofort Tablets —one with each meal—supplies:

L-Lysine Monohydrochloride	790 mg.*
Vitamin A	25,000 U.S.P. units
Vitamin D	1,000 U.S.P. units
Thiamine Mononitrate	10 mg.
Riboflavin	10 mg.
Pyridoxine Hydrochloride	2 mg.
Niacinamide	100 mg.
Calcium Pantothenate	20 mg.
Vitamin B_{12} Activity (Cobalamin)	4 mcg.
Folic Acid	1.5 mg.
Ascorbic Acid	300 mg.

*equivalent to 600 mg. L-lysine

Administration with meals is essential to obtain the maximal benefit of lysine fortification of dietary protein.

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References: 1. Flodin, N. W.: Am. Miller & Processor *81*:30 (July) 1953. 2. Block, R. J., in Advances in Protein Chemistry, Anson, M. L., and Edsall, J. T., eds., New York, Academic Press, Inc., 1945, vol. 2, p. 119.

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choleretic
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digestant . . .

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Torocol tablets contain: bile salts, ext. cascara sagrada, phenolphthalein, oleoresin capsicum, oil peppermint.

write for Torocol samples

The Paul Plessner Company
Detroit 16, Mich.

—Continued from page 158a

group. The antibacterial effect was comparable to the results achieved with standard doses of other sulfonamides. Escherichia coli was the most responsive whereas the results with other species was, in general, poor. Susceptible bacterial strains were eradicated after one or two weeks of treatment or not at all.

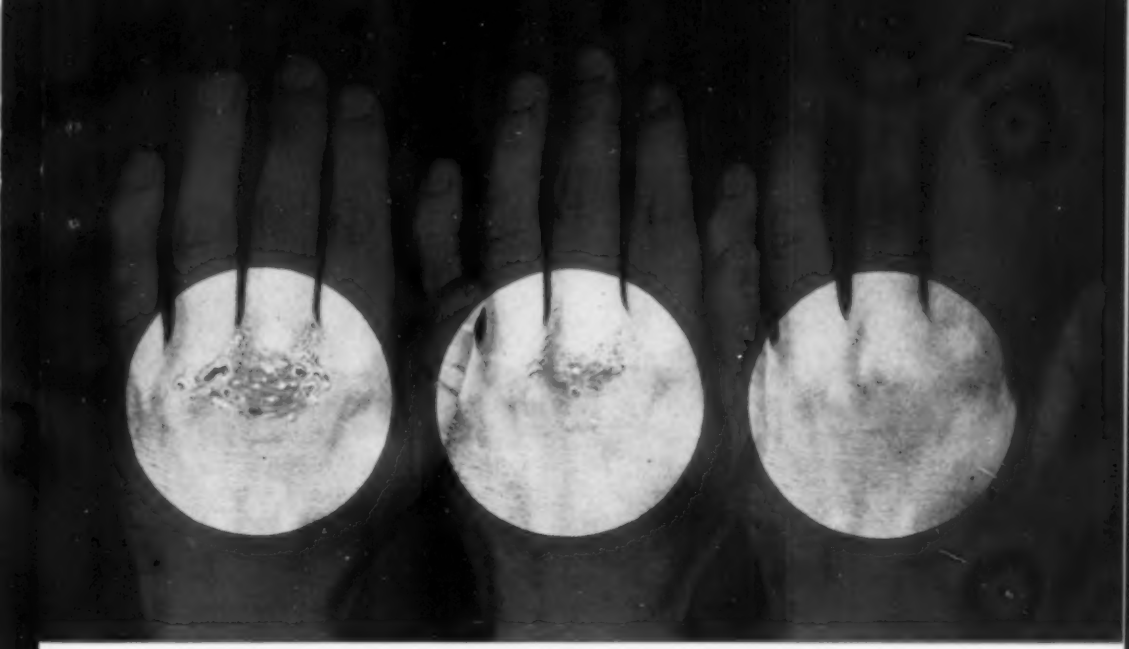
"The nature of the bacterial infection and the therapeutic results were significantly influenced by certain host factors. The low proportion of patients cured of urinary-tract infections is not unusual. Mixed bacterial cultures and superinfections during and immediately after treatment were the principal cause for the failure."

by Hans G. Grieble
and George Gee Jackson
New England Journal of Medicine,
Vol. 258, No. 1

Excretion of Mecamylamine After Intravenous and Oral Administration

"These observations upon the excretion and duration of effect of mecamylamine suggest that it possesses at least some of the pharmacological properties desirable in a hypotensive agent for oral administration. Unlike hexamethonium and pentolinium, a large proportion, between 55 and 75%, of an oral dose may be recovered from the urine, which seems to indicate satisfactory absorption from the alimentary tract. Excretion is steady and prolonged, approximately 50% or less of the total amount recovered after a single dose

—Continued on page 162a



you can clear topical infections promptly with

NEO-POLYCIN*

...because Neo-Polycin provides 3 preferred topical antibiotics

NEOMYCIN / BACITRACIN / POLYMYXIN

in the unique Fuzene® base which releases greater antibiotic concentrations than do ordinary grease-base ointments.

NEO-POLYCIN covers the entire range of bacteria most often found in topical lesions...has a low index of sensitivity...averts the risk of sensitization to lifesaving antibiotics, since the antibiotics used in Neo-Polycin are rarely used systemically...is miscible with blood, pus and tissue exudates without loss of efficacy.

Each gram of Neo-Polycin Ointment contains 3 mg. of neomycin, 8000 units of polymyxin B sulfate and 400 units of bacitracin in the unique Fuzene (polyethylene glycol diester) base. Supplied in 15 Gm. tubes. Also supplied as Neo-Polycin Ophthalmic Ointment (anhydrous, lanolin-petrolatum base) in ⅛ oz. tubes.

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—Continued from page 160a

appearing in the urine during the first 12 hours after administration. Likewise, there is a smooth and sustained fall of blood pressure following an oral dose. Daily excretion studies have suggested that mecamylamine is consistently and reliably absorbed within reasonably narrow limits. In the light of these findings blood-pressure controls should be obtained with relatively infrequent oral dosage and the blood pressure should not be subject to the fluctuation which has made treatment of other ganglion-blocking agents somewhat unsatisfactory. Doyle et al. (1956) have already published a report on the use of mecamylamine in 45 patients, and state that adequate control may be achieved with two doses daily. If the urine is alkaline, excretion of mecamylamine is almost entirely prevented, and it is likely that administration of acetazolamide had a similar effect. In either circumstance accumulation of the drug may occur and a prolonged fall of blood pressure will result."

by K. D. Allanby and J. R. Trounce
British Medical Journal
No. 5055, P. 1221, Nov. 23, 1957

Psychomotility and Parkinsonism in Treatment with Neuroleptic Drugs

"Chlorpromazine and reserpine are most effective in the treatment of those psychiatric disorders which have in common hypermotility, hypernormal initiative, and increased affective tension. Both drugs inhibit psychomotor activity in a manner which involves changes in the functional balance of the extrapyramidal motor system. If pro-

—Continued on page 164a



choice salt substitute in a pinch...

and in any low-salt diet you prescribe

DIASAL®

salt without sodium

looks like salt...
tastes like salt...
flavors food like salt

DIASAL, containing potassium chloride, glutamic acid and inert ingredients, is supplied in 2-ounce shakers and 8-ounce bottles.

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morning joint stiffness...

PERSISTIN*

Night-long salicylate therapy with a single dose of Persistin at bed-time helps prevent "joint jelling" in arthritic patients.

Each Persistin tablet contains acetylsalicylic acid 2½ gr. (160 mg.) and salicylsalicylic acid 7½ gr. (480 mg.). The latter ingredient is slowly absorbed and eliminated for prolonged salicylate action up to 8 hours.

Complete dosage information in PDR . . . bottles of 90 tablets

PERSISTIN

Samples and literature on request

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Detroit 11, Michigan

*Trademark—Pat. Pend.

—Continued from page 162a

nounced, these changes are associated with a clinical picture of Parkinsonism.

A two-year study of 653 psychiatric patients under treatment with chlorpromazine and reserpine revealed the incidence of Parkinsonism to be 10.7% and 16.9%, respectively. Neither diagnosis, age, duration of treatment, nor total dosage shows correlation with Parkinsonism. These data do not support the assumption of toxicity as a causative factor.

A most significant sexual difference is apparent, since the frequency of Parkinsonism is twice as high in women regardless of the choice of drug. No explanation can be offered at present. This observation, however, together with other reported findings, suggests that individuality differentials account for the considerable range of physiological and psychological responses.

The property of neuroleptic drugs to produce Parkinsonism offers unique opportunities for investigations of psychomotor function and psychopathology."

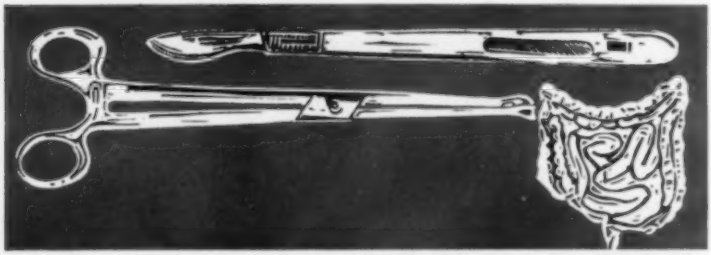
by F. A. Freyhan, M.D.
A.M.A. Archives of Neurology and Psychiatry, Nov., 1957

Influence of a Safflower Oil Emulsion on Serum Cholesterol Level

"Twenty male volunteers, on their usual diets, took 2 tablespoonfuls of Saff for 28-30 days.

The average fall in serum cholesterol

—Continued on page 166a



SULFASUXIDINE®

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Many years of widespread use have demonstrated the importance of SULFASUXIDINE in bowel surgery. It minimizes the danger of infection by producing a low bacterial count in the gut and reduces incidence of flatulence. Normal healing is encouraged.

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DIVISION OF MERCK & CO., Inc., PHILADELPHIA 1, PA.

in the peptic-ulcer regimen

ACID NEUTRALIZATION
is fundamental



"In all essential respects subsequent investigations have corroborated the original concept of Sippy [acid neutralization]."[1]

1. Cecil, R.L., and Loeb, R.F.: A Textbook of Medicine, W.B. Saunders Co., Philadelphia, 1955, 9th ed., p. 870.

FUNDAMENTAL THERAPY IN PEPTIC ULCER

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AMPHOJEL®

Aluminum Hydroxide Gel, Wyeth

double gel
for diphasic action

—Continued from page 164a

level was 27.8 mg. %, statistically significant. The fall took place in 14 out of the 20 subjects. At this dosage level, should a similar experiment be repeated, according to Mainland's table of binomial confidence limits, a fall in cholesterol level may be expected in 45.7 to 88.1% of cases.

From this same group ten volunteers were placed on 5 tablespoonfuls of Saff for a further period of 28-30 days. In them, the fall in serum cholesterol was 52.0 mg. %, statistically significant. This fall occurred in 9 out of 10 subjects. In terms of binomial confidence limits, in another similar experiment, a decrease in serum cholestrol may be expected in 54.5 to 99.75% of cases.

The volunteers liked the taste and smell of the product, but there was some digestive disturbance, usually of a mild nature, especially at the commencement of the regimen. Two men developed diarrhea, but they proceeded with the experiment."

by Harding leRiche
The Canadian Medical Association Journal, Nov. 1, 1957

Antibiotics and Chronic Bronchitis

"The life of a chronic bronchitic is full of discomforts and difficulties. In seeking to help him, we must make sure that we do not waste money or undermine the usefulness of antibiotics in other diseases, by their indiscriminate use in chronic bronchitis. Many chronic bronchitics whose main disability is due to an asthmatic tendency and consequent emphysema, have little need for antibiotic treatment except during known acute episodes of pneumonia or suppurative bronchitis. Others with a greater or lesser amount of purulent sputum may need prompt antibiotic treatment of 'flares', coupled with a regular hygienic regiment of postural drainage and percussion. Continuous prophylactic treatment with oral broad-spectrum antibiotics should be reserved for a minority of patients who are able to use the method intelligently and who have been found by past experience to have derived undoubted benefit from it, to have improved their working capacity and to have lessened their sick absences.

"In selecting cases for a trial of continuous antibiotic treatment it is important to choose only those with purulent sputum who are able to cooperate, and to have good bacteriological evi-

—Continued on page 168a

WHAT'S YOUR VERDICT?

(from page 39a)

The Supreme Court affirmed the judgment of the trial court, holding: The expert testimony presented at the trial gave no evidence that the intern employed by the defendant had failed to conform to accepted standards of care and treatment prescribed for physicians in the community, or that the treatment performed by the intern was the proximate cause of the injury.

Based on decision of the
SUPREME COURT OF DELAWARE



*"Intranasal and sinus infections have been found to disappear more promptly . . . helps to combat the associated nasopharyngitis . . ."**

nasal infections disappear

Furacin® Nasal

BRAND OF NITROFURAZONE

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IN SINUSITIS, RHINITIS AND NASOPHARYNGITIS, FURACIN exerts bactericidal action against the majority of gram-positive and gram-negative organisms *without tissue toxicity*. It prevents malodor and crusting and does not interfere with phagocytosis. With FURACIN, there is no slowing of the ciliary beat, no stinging and no irritation. The vasoconstrictor affords rapid symptomatic relief. Prescribe plastic atomizer of 15 cc.

FORMULA: FURACIN 0.02% with phenylephrine • HCl 0.25% in aqueous isotonic solution.



For infections of the eye and ear:

FURACIN OPHTHALMIC Liquid • Ointment

FURACIN EAR Solution

FURACIN–the topical antibacterial most widely useful to the physician–in formulations especially effective in EEN infections

*Spencer, J. T., in Conn, H. F.: Current Therapy 1954, Philadelphia, W. B. Saunders Co., 1954, p. 130.

EATON LABORATORIES NORWICH, NEW YORK

—Continued from page 166a

dence that the trial is likely to be of value."

by J. M. Naish
The Practitioner, Vol. 179, No. 1074

Effects of Oral and Intramuscular Administration of Resperine in Thyrotoxicosis

"The effects of oral or intramuscular administration of reserpine as the sole therapeutic agent were evaluated in 21 studies in 20 hyperthyroid patients.

"In 11 studies reserpine was given by mouth for fourteen to one hundred and four days. Significant clinical improvement occurred in all subjects. Severe hyperthyroidism was converted to mild disease after two to four weeks of treatment. Four patients became clinically euthyroid except for the persistence of a diffusely enlarged thyroid gland.

"Ten patients were given large intramuscular doses of reserpine. Marked improvement in heart rate, eye signs, skin and tremor occurred within hours; maximum improvement was achieved in twenty-four to seventy-two hours. Despite clinical improvement, the 24-hour uptake of radioactive iodine and the levels of protein-bound iodine remained in the hyperthyroid range throughout the period of treatment. These studies indicate that reserpine may prove to be a useful adjunct in the management of severe hyperthyroidism.

"Hyperthyroid patients receiving reserpine may not demonstrate the usual clinical manifestations of their disease except for an enlarged thyroid gland. Detection of the underlying disorder in this circumstance will depend on the

—Continued on page 170a

WIDE THERAPEUTIC RANGE WITH SAFETY. Each patient has wide physiological and emotional tolerances to anticholinergics. Malcotran's wide dosage latitude facilitates regulation of your patient's dosage *according to his need, not his tolerance.*

Malcotran assures prompt arrest of gastro-intestinal motility — and reduction of gastric secretion.



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for peptic ulcer

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when you want Broad-Spectrum Benefits . . .

When you want extended antibacterial coverage with high relative safety, consider PEN·VEE SULFAS. Consider how it permits you to reserve the conventional broad-spectrum antibiotics for the resistant infections specifically requiring them. Consider PEN·VEE SULFAS because it unites penicillin V and sulfapyrimidines for potent complementary action. Prescribe it for wide antimicrobial attack in mixed infections and those not readily diagnosed.

Supplied: PEN·VEE SULFAS Tablets, bottles of 36. Each tablet contains 90 mg. (150,000 units) of penicillin V, 0.25 Gm. of sulfadiazine, and 0.25 Gm. of sulfamerazine. PEN·VEE SULFAS for Suspension, bottles of 2 fl. oz. upon reconstitution. Each 5-cc. teaspoonful after reconstitution contains 90 mg. (150,000 units) of benzathine penicillin V, 0.25 Gm. of sulfadiazine, and 0.25 Gm. of sulfamerazine.

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Tablets: Penicillin V (Phenoxymethyl Penicillin) and Sulfonamides
For Suspension: Benzathine Penicillin V and Sulfonamides

MODERN THERAPEUTICS

—Continued from page 168a

measurement of the uptake of radioactive iodine or the level of protein-bound iodine, or upon the appearance of clinical features of hyperthyroidism after reserpine is stopped. There is a risk that the increasing use of reserpine in the nervous population will cause hyperthyroidism to go undetected."

by John J. Canary, Marcus Schaaf, Benedict J. Duffy, Jr. and Laurence H. Kyle
New England Journal of Medicine, Vol. 257, No. 10

Mecamylamine, a Ganglion-blocking Drug for Treating Hypertension

"Mecamylamine reduces hypertension by ganglion blockade and is well absorbed by mouth.

"Of 36 patients considered suitable for long-term treatment with mecamylamine, 20 were followed up for periods up to eighteen months.

"The hypotensive effect begins in one or two hours and is maximal from the third to the sixth hour.

"Relief of subjective and objective manifestations of hypertensive disease was often observed; but, for the purpose of assessing the value of mecamylamine, the result was judged by its effect in reducing blood pressure. This was considered to be good in 14 patients and fairly good in 6.

"Reasons for failure to achieve a good result include resistance to mecamylamine and intolerance of parasympathetic side-effects or occasionally secondary effects from hypertension.

"An appreciable degree of tolerance developed initially in many of the patients but persisted in only a few. Side-effects were troublesome in most cases, particularly from impairment of accommodation, dryness of the mouth, and constipation. In some patients diarrhoea was severe but did not persist.

"Nine of 13 patients benefited from a combination of mecamylamine with either serpasil or rauwiloid.

"Mecamylamine is probably the best of the ganglion-blocking drugs at present available but is far from ideal."

by Arthur Kitchin, Clifton P. Lowther and Richard W. D. Turner
The Lancet, Vol. CCLXXIII, No. 6996

Chlorothiazide: An Oral Diuretic

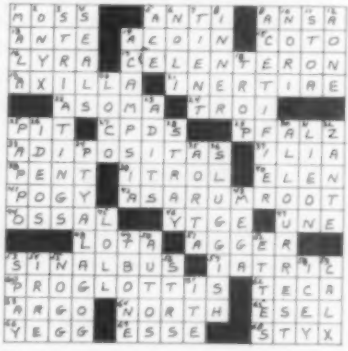
"The value of chlorothiazide, a non-mercurial orally effective diuretic, has been assessed in 24 edematous patients, of which 17 had congestive heart-failure and 11 had responded poorly to mersalyl.

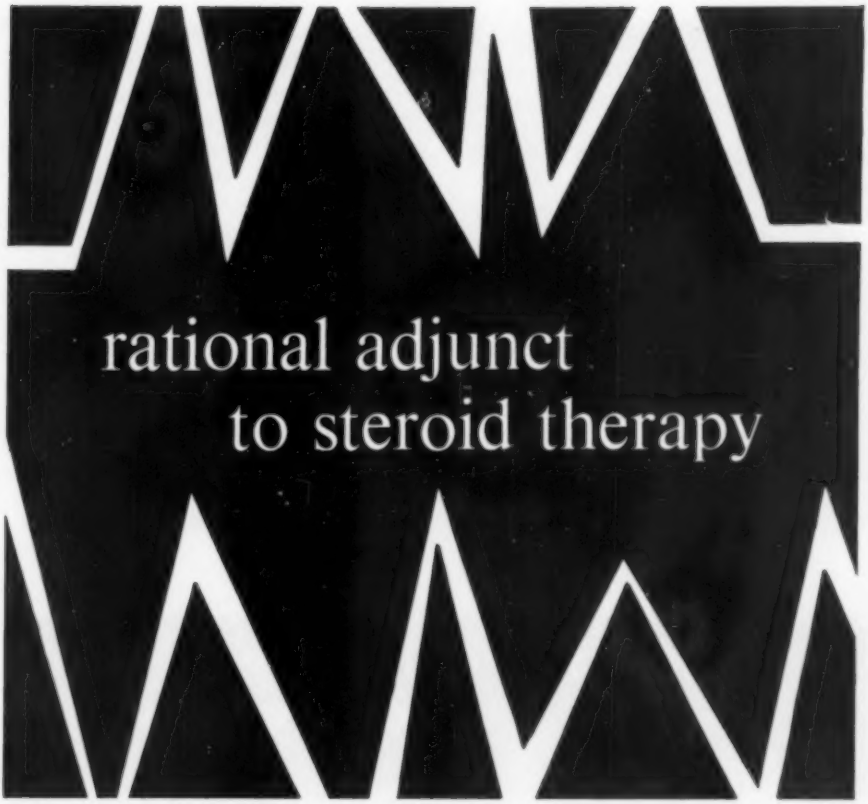
"A daily dose of 2 g. produced good results (with clearing of the edema) in 14 patients. In 7 the results were less

—Continued on page 172a

MEDICAL TEASERS

Solution to puzzle on page 51a





When steroids are indicated, the adjuvant use of a stress formula containing essential vitamins helps meet increased metabolic demands. STRESSCAPS provide the principal water-soluble vitamins in a professionally accepted formulation.

Each Capsule Contains:

Thiamine Mononitrate (B_1)	10 mg.
Riboflavin (B_2)	10 mg.
Niacinamide	100 mg.
Ascorbic Acid (C)	300 mg.
Pyridoxine HCl (B_6)	2 mg.
Vitamin B_{12}	4 mcgm.
Folic Acid	1.5 mg.
Calcium Pantothenate	20 mg.
Vitamin K (Menadione)	2 mg.

Average Dose: 1-2 capsules daily.

STRESSCAPS in STRESS

• Infection • Physiologic Trauma • Endocrine Dysfunction • Emotional Stress • Pre- and Postoperatively

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Stress Formula Vitamins *Lederle*

LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, NEW YORK

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MODERN THERAPEUTICS

—Continued from page 170

satisfactory, and in 3 they were poor.

"Chlorothiazide may be effective in patients who do not respond to mersalyl, and it enhances the response to mersalyl even in patients who have become mercalyl-resistant.

"Except for one patient who developed malaise and anorexia, no toxic effects were observed.

"Chlorothiazide may cause potassium depletion, particularly if continuous treatment with 2 g. daily is given over a long period. In refractory cases this dosage may be required and should be supplemented with 2-6 g. potassium chloride (sufficient to maintain a normal serum-potassium level). In less severe cases which respond quickly a smaller dose of chlorethiazide (1.0-1.5 g. daily) may suffice; and for maintenance therapy the drug may be given intermittently on three or four days each week."

by R. I. S. Bayliss, Jeanette Pirkis, David Marrack, J. R. Rees, Joan F. Zilva

The Lancet,
No. 7012, Vol. 1 for 1958, Jan. 18, 1958

Treatment of Undulant Fever

"In all our knowledge and experience of undulant fever we have never seen or achieved such good results. This



infectious disease is completely cured in about five days without a single recurrence.

For these reasons we regard cathomycin as an efficacious and specific antibiotic to be introduced and used in the treatment of undulant fever. If our findings are confirmed, as we feel sure they must be, we may consider the battle against brucellosis to have been won."

by J. Torres Gost
The Lancet, Jan., 1958

Long-term Control of Severe Bronchial Asthma with Oral Cortisone

"The place of cortisone and allied substances in the treatment of asthma is still not clear except in status where its usefulness is well established. Administraiton over limited periods can also be invaluable at all ages in patients who are not, strictly speaking, in status asthmaticus. In the elderly bronchitic we have used it in two ways. When the bronchial obstruction is severe and not responding to antibiotics and antispasmodics the early use of cortisone, while the antibiotics are continued, is often helpful.

Many of these patients, though making a partial recovery with standard measures, continue to have bronchial obstructions even after two weeks'

—Continued on page 176a



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Clears up the severest dandruff with just 3 applications



RELIEF LASTS FOR MONTHS

Twenty months of clinical investigation on dandruff demonstrate *complete clearing of scaling in all cases,* usually *with just three applications* of easy-to-use THERADAN. Dandruff cases resistant to resorcin, sulfur and selenium preparations clear promptly and safely with new THERADAN.

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This unique solution not only clears loose dandruff, but also removes dead tissue by penetrating the outermost layers of the scalp. In mild or moderate cases of seborrhea, THERADAN is left on the scalp for ½ to 1 hour before shampooing. In severe cases, THERADAN is left on up to eight hours or over night.

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active ingredients

Sarthionate

bis-(laurylmethylammonium)-polythionate . (by weight) . 3.0%

tetradecylamino-n-lauroyl sarcosine . . . . . (by weight) . 0.5%

ethyl alcohol . . . . . (by volume) . 68.86%



For more information about the clinical background of THERADAN, write to Medical Director, Dept. M-48

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Documentary Case History . . .

Hypertension controlled for four years with **Serpasil**®

(reserpine CIBA)



K. C., a 67-year-old retired shirt manufacturer, had a 16-year history of hypertension, was troubled by recurrent dizzy spells and headaches. "I'd get several attacks a day. . . . Usually I'd go into the bedroom and lie down." Serpasil therapy was started four years ago, effecting a gradual reduction of the patient's initial blood pressure of 220/120 mm. to the present 140/80. Now well and asymptomatic, ". . . I'm able to go to matinees and see some of the TV shows."

SUPPLIED: TABLETS, 4 mg. (scored), 2 mg. (scored), 1 mg. (scored), 0.25 mg. (scored) and 0.1 mg.

ELIXIRS, 1 mg. and 0.2 mg. Serpasil per 4-ml. teaspoon.

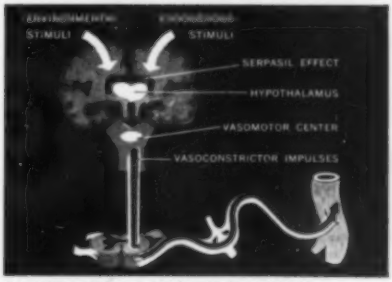
PARENTERAL SOLUTION: *Ampuls*, 2 ml., 2.5 mg. Serpasil per ml. *Multiple-dose Vials*, 10 ml., 2.5 mg. Serpasil per ml.



Hypertension controlled through

SYMPATHETIC REGULATION

Serpasil shields the psychic and somatic reaction centers from emotional and environmental stress stimuli, thereby inhibiting the discharge of vasoconstrictive impulses through the sympathetic nerves.



Adapted from Moyer, J. H., Lennis, E., and Ford, R.: Arch. Int. Med. 96:530 (Oct.) 1955.

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COMPOSITION . . . Coating of blond psyllium refined to unique particle size and dispersed in lactose and dextrose.

RATIONALE . . . Supplies bulk, consisting of naturally occurring hemicelluloses which disperse with intestinal contents to form a softly compact, well formed stool of physiological consistency.

INDICATIONS . . . Chronic constipation, non-specific diarrheas, following ano-rectal surgery, and whenever normal stools are desirable.

CONTRAINDICATIONS . . . Intestinal obstruction of organic origin.

DOSAGE . . . ½ t.i.d. in glass of water, milk, or fruit juice (palatability unsurpassed).

for clinical trial sample packages, send to

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WASHINGTON 9, D. C.

—Continued from page 175a

treatment. A short course of cortisone can then be helpful. It reduces the hospital stay and saves beds at a time when they are precious in areas where chronic bronchitis is endemic. It has been used successfully in the presence of pulmonary heart-disease with congestive failure and in patients with hypertension where the heart-failure may have had a mixed aetiology.

"The chronic asthmatic patient who has reached the stage of protracted invalidism presents the difficult problem. In ours and other series the long-term results in carefully conducted control series are not statistically convincing, but there are cases where long-term cortisone seems to have rescued patients from complete invalidism. It is likely that not more than a third of patients can be expected to gain long-continued benefit, and yet, provided that only asthmatics who have reached a state of invalidism are chosen, a trial of cortisone does seem to be justified.

"It must start with a big dose (300 mg.) decreasing by 25 mg. daily until the supply ceases. This is very important. The course can always be repeated in full. When a patient breaks down quickly, it is advisable to wait two or three weeks and repeat the course. In this instance it may be necessary to maintain a dose of 75 mg.—preferably for a limited time, and the patient must understand this, or failures will become addicts and useless and dangerous treatment has to be continued. In the successful cases it may be found that improvement can be main-

—Continued on page 178a

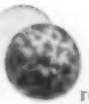


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- to eliminate stilbestrol nausea

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MODERN THERAPEUTICS

—Continued from page 176a

tained only by continued use of cortisone. While it is maintained, this is justified.

"The aetiology of asthma remains an enigma. Allergy, infection and anxiety receive different emphasis from different authorities. Whether the anxiety (when present) is primary, or secondary, to the asthma is even more difficult to assess. If a patient with severe incapacitating asthma can be rendered spasm-free and allowed to return to normal life there is a possibility of a reasonable remission. With this hope the use of cortisone on the lines suggested would always seem worth while when, and only when, all usual measures have failed.

"Oral cortisone has a useful place in the treatment of status asthmaticus and of picked cases of severe chronic asthma, provided that it is given initially on a short-term basis.

"Long-term treatment with cortisone should be avoided if possible.

"Cortisone can often be usefully combined with antibiotics.

"In our experience cortisone given during pregnancy does not have any deleterious effect on mother or child."

by William Brockbank, Ronald S. Savidge and Hugh Brebner
The Lancet, Vol. CCLXXIII, No. 6997

—Concluded on page 180a

How to

irrigate and rinse, quickly, easily and effectively



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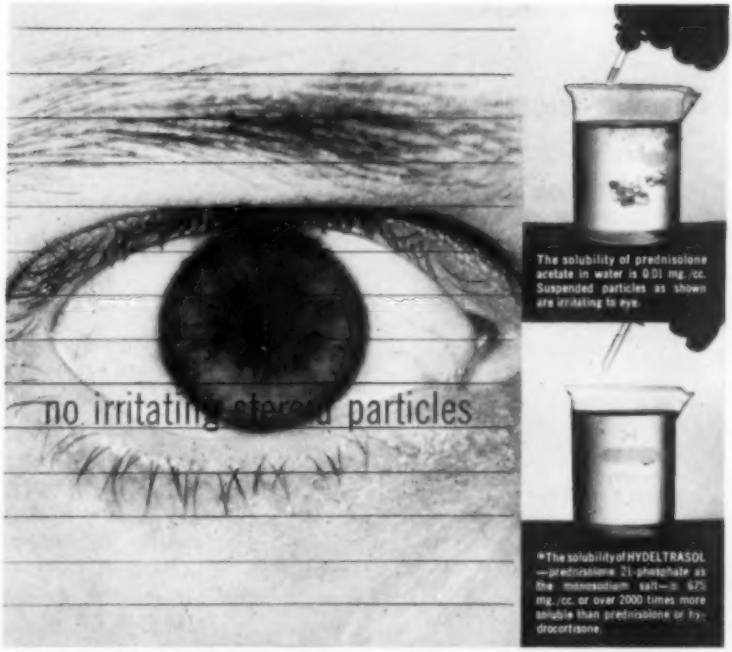
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Zephiran chloride, recognized as the *quality* antiseptic, can serve many functions in your practice as a dependable, safe, and economical cationic detergent. Zephiran aqueous solution 1:20,000 to 1:5,000 makes an ideal eye, ear, nose and throat rinse; an effective irrigation fluid for obstetric, gynecologic and genito-urinary cases; and for cleansing and flushing in the débridement of wounds. Zephiran is nonirritating and virtually nontoxic. In its manufacture only the finest available grades of raw materials are used. Special manufacturing and purification processes are employed. The finished product is subjected not only to prescribed U.S.P. tests but also to special toxicity and tissue irritation experiments to ensure highest purity and optimal tolerance.

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(prednisolone 21-phosphate with neomycin sulfate)

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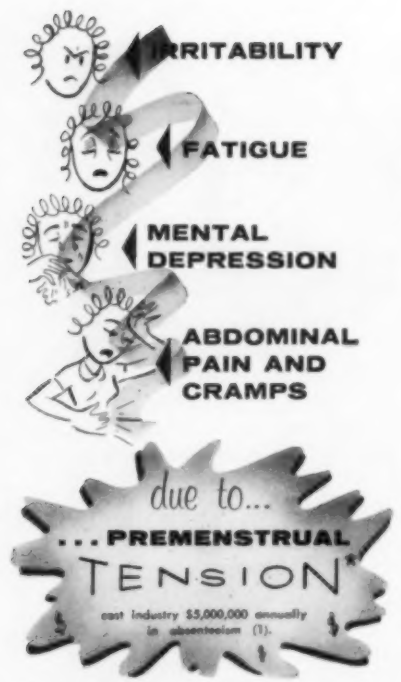
- free of any particulate matter capable of injuring ocular tissues.
- uniformly higher effective levels of prednisolone.

SUPPLIED: Sterile Ophthalmic Solution NEO-HYDELTRASOL 0.5% (with neomycin sulfate) and Sterile Ophthalmic Solution HYDELTRASOL 0.5%. In 5 cc. and 2.5 cc. dropper vials. Also available as Ophthalmic Ointment NEO-HYDELTRASOL 0.25% (with neomycin sulfate) and Ophthalmic Ointment HYDELTRASOL 0.25%. In 3.5 Gm. tubes.

HYDELTRASOL and NEO-HYDELTRASOL are trade-marks of Merck & Co., Inc.

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*These conditions respond to HVC (Hayden's Viburnum Compound), prescribed by physicians for over ninety years as a sedative and smooth muscle relaxant. Symptomatic relief is both prompt and prolonged.



HVC
HAYDEN'S VIBURNUM COMPOUND

Contains viburnum opulus, dioscorea, prickly ash berries, aromatics and sufficient alcohol to release the resins in the crude drugs.

USE COUPON TO REQUEST LITERATURE AND PROFESSIONAL SAMPLES.

NEW YORK PHARMACEUTICAL CO.
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Please send my sample to:

Name _____

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(1) Ferguson, J. H., Archivos Medicos de Cuba, 7:189 (July-Nov.) 1936

MODERN THERAPEUTICS——

—Concluded from page 178a

Report on Barbiturates

"As rational steps toward stopping the misuse of barbiturates and especially reducing the present high rate of incidence of barbiturate poisoning, the Committee on Public Health offers the following recommendations:

1. The model law controlling the manufacture and distribution of barbiturates should be adopted by all the states. Large cities with home rule should also have laws patterned after this act.
2. A realistic effort toward enforcement of the model law when enacted is an essential step. An adequate staff of inspectors to examine records should be organized. Efforts at enforcement should be concentrated on the large cities, where the rates of incidence of barbiturate poisoning are highest.
3. An educational campaign should be conducted by health departments, and medical and pharmaceutical societies to remind their members of their responsibility of acquainting patients with the dangers of misuse of barbiturates. At the same time there should be a campaign, using all media, to inform the public of the risks attached to the misuse of barbiturates.
4. Above all, it is highly desirable that adequate funds should be provided to support research on the causes of unrest, anxiety, and tension that are so prevalent among the population and are the basis for such great use and misuse of barbiturates."

Report on Barbiturates
by the N. Y. Academy of Medicine,
June 1956, second series, Vol. 32, No. 6



single-tablet dosage controls and prevents bronchospasm!

Single-tablet dosage with Cholarace, 1 tablet q.4.h., *aborts* acute bronchospasm attacks . . . helps build patient-protection against recurrence! And rarely causes any gastric disturbance. Prescribe Cholarace for acute bronchospasm in asthma, hay fever, bronchitis and pulmonary infections in general.

CHOLARACE WORKS TWO WAYS!

Tablet Coating contains racephedrine HCl (20 mg.) for rapid bronchodilatation with less CNS stimulation than ephedrine alone . . . plus gentle pentobarbital (27.5 mg.) for quieting without "hangover."

Tablet Core provides long-lasting bronchodilatation with 200 mg. of well tolerated, easily absorbed choline theophyllinate (Choledyl®).

Nepera Laboratories, Morris Plains, N. J.

CHOLARACE®

for complete bronchospasm control

NEPERA

NEWS AND NOTES

La Rabida Affiliates with Chicago University

The signing of the contract making La Rabida Jackson Park Sanitarium an affiliate of the University of Chicago School of Medicine has been announced recently. Under the agreement, the Medical School will appoint the sanitarium's medical director, supervise the care of patients, and conduct its research program as well as direct its teaching program.

Retarded Persons Studied at New York University

A grant of $120,000 to New York University for a two-year study of the factors determining the institutionalization of retarded persons has been announced. The goal is to find out whether institutionalization constitutes the best possible solution for different groups of retarded persons now usually sent to institutions. To obtain data that may lead to improvement in services for the retarded, a staff of fifty professional social workers attached to the research center of the Graduate School of Public Administration and Social Services will make an investigation of records of institutions, public and private social agencies, schools, and special clinics. A major part of the study will consist of interviews with about 1,000 parents of retarded persons between the ages of one and 25 to get their reactions toward services they have received.

Dr. John L. Enyart Appointed

Dr. John L. Enyart, who retired as U. S. Naval Surgeon of the NATO Forces, has been appointed administrator of the Institute of Physical Medicine and Rehabilitation, New York University-Bellevue Medical Center. Dr. Enyart has held several important posts in the Armed Forces both here and abroad.

Dr. Elmer Hess Heads Selective Service Committee

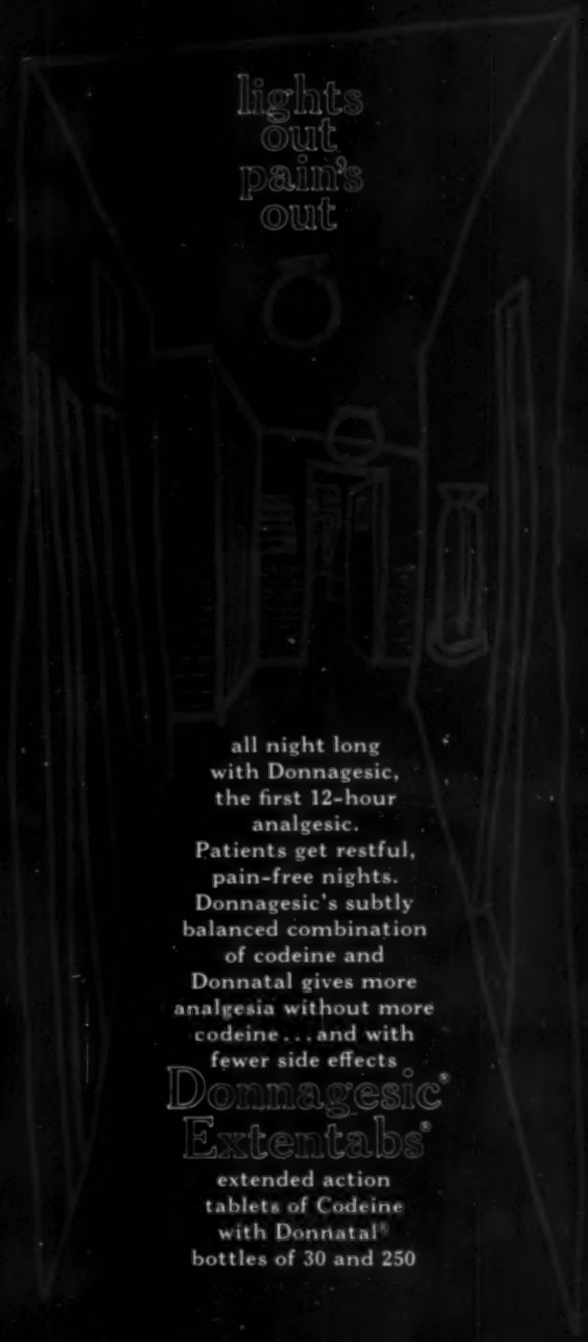
Dr. Elmer Hess, of Erie, New York, has been appointed by President Eisenhower as Chairman of the National Advisory Committee to Selective Service on the Selection of Physicians, Dentists and Allied Specialists. The committee advises on the induction of medical and dental officers in the Armed Services.

Orthopsychiatric Sessions to Emphasize Research, Community Mental Health

The American Orthopsychiatric Association will emphasize research and public health aspects of mental health in its three-day 36th annual meeting beginning Thursday, March 6, 1958, in the Hotels Commodore and Roosevelt, New York City.

More than 5,000 psychiatrists, psychologists, psychiatric social workers, educators and other specialists in the behavioral sciences from all parts of the United States and Canada are expected to attend.

—Continued on page 186a



all night long
with Donnagesic,
the first 12-hour
analgesic.
Patients get restful,
pain-free nights.
Donnagesic's subtly
balanced combination
of codeine and
Donnatal gives more
analgesia without more
codeine . . . and with
fewer side effects.

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extended action
tablets of Codeine
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bottles of 30 and 250

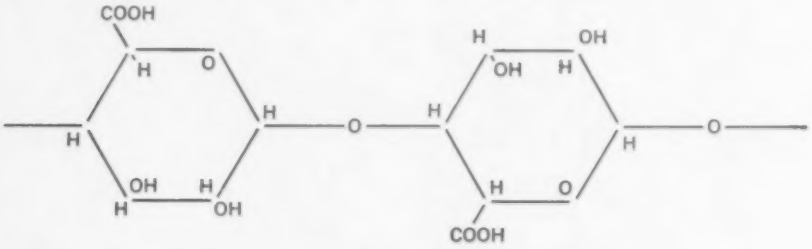
DONNAGESIC No. 1 (pink) CODEINE Phosphate (¾ gr.) 48.6 mg. Hyoscyamine Sulfate 0.3111 mg. Atropine Sulfate 0.0582 mg. / Hyoscine Hydrobromide 0.0195 mg. / Phenobarbital (¼ gr.) 48.6 mg. / also available: **DONNAGESIC No. 2 (red)** containing 1½ gr. (97.2 mg.) codeine phosphate. / Since one Donnagesic Extentab achieves continuous analgesia for 10 to 12 hours, it replaces 3 equivalent doses of codeine and Donnatal. **A. H. ROBINS CO., INC.,** Richmond 20, Virginia • Ethical Pharmaceuticals of Merit Since 1878

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A therapeutic agent of choice for over 20 years

PECTIN N.F., a natural hydrophilic colloid, has the property of conjugating toxins and enhancing the physiologic function of the digestive tract through its physical, chemical and anti-bacterial properties. The molecular structure of PECTIN consists of partially esterified polygalacturonic acid. The molecular weight of PECTIN is 100,000 to 250,000.



POLYGALACTURONIC ACID

Molecular weight of the anhydro-galacturonic acid unit (one-half of the above formula) is 176 *(x-range 75—200)*

In brief, Exchange Brand PECTIN N. F.—

Increases bulk and fluid retention of upper intestinal contents and imparts a smooth, gelatinous consistency.

Lubricates the intestinal wall.

Promotes normal peristalsis without mechanical irritation.

Reduces intestinal pH.

Inhibits growth of many putrefactive and otherwise undesirable microorganisms in the intestines without affecting normal flora.

Promotes assimilation of essential nutrients.

Helps to conjugate and eliminate toxins.

Reduces toxic side effects of therapeutic agents.

Exchange Citrus Pectin and Pectin Derivatives widely used in therapeutic specialties include:

PECTIN N.F.
PECTIN CELLULOSE COMPLEX
POLYGALACTURONIC ACID
GALACTURONIC ACID

They are available to the medical profession in specialties of leading pharmaceutical manufacturers.

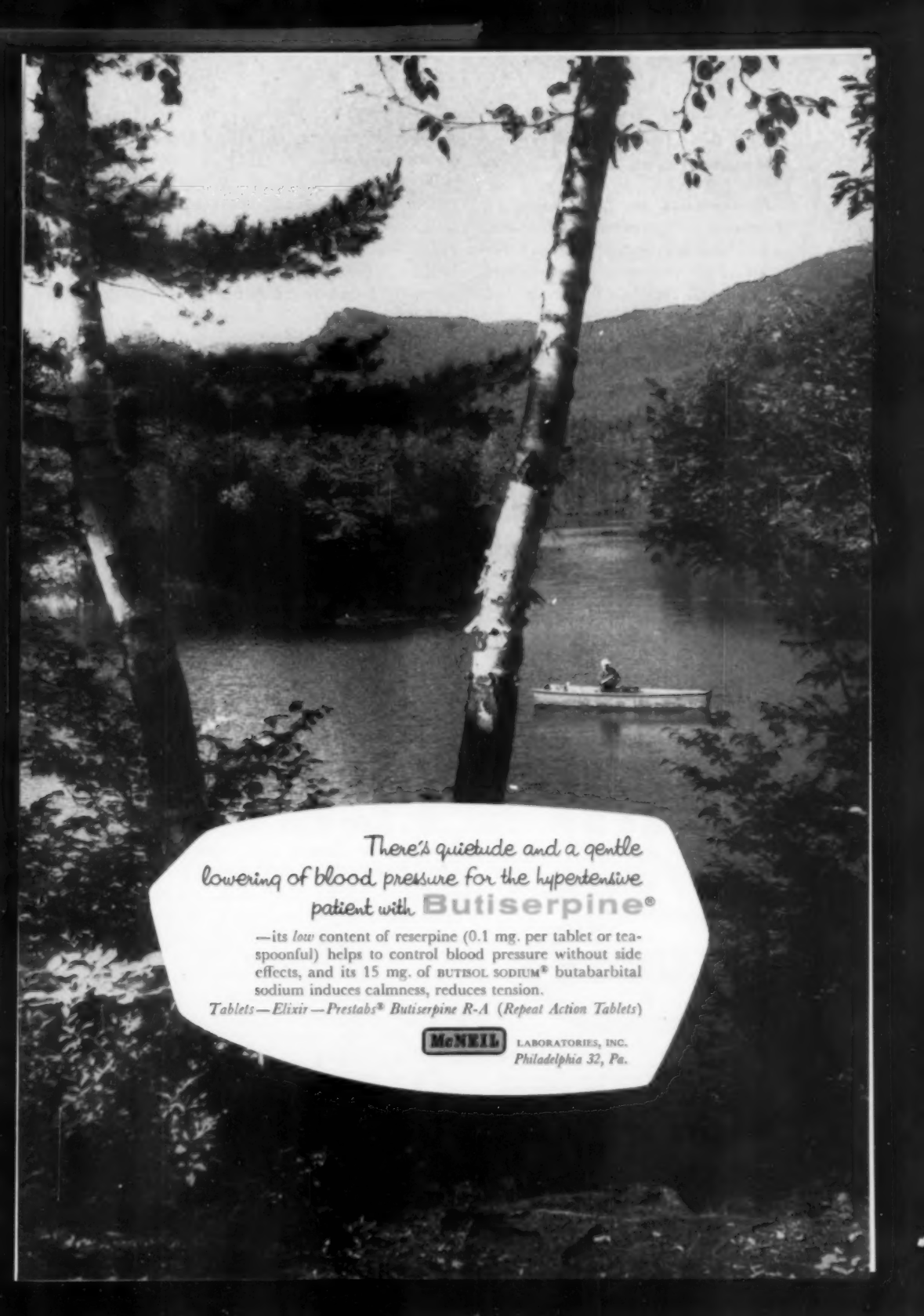
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—its *low* content of reserpine (0.1 mg. per tablet or teaspoonful) helps to control blood pressure without side effects, and its 15 mg. of BUTISOL SODIUM® butabarbital sodium induces calmness, reduces tension.
Tablets—Elixir—Prestabs® Butiserpine R-A (Repeat Action Tablets)
McNEIL LABORATORIES, INC.
Philadelphia 32, Pa.

NEWS AND NOTES

—Continued from page 182a

Arrangements are being made for attendance by non-members, according to Dr. Marion F. Langer, executive secretary of the association. The program, she said, will include a session on community mental health services, being arranged jointly with the mental health section of the American Public Health Association, and other joint sessions with the American Academy of Child Psychiatry and the American Association of Psychiatric Clinics for Children.

The association is a national professional organization in the field of the behavioral sciences. It brings together the key disciplines involved in the team approach to prevention and treatment of behavior problems and related training and research.

Dr. Reginald S. Lourie, psychiatrist at Children's Hospital, Washington, D. C., and president of the association, will address an opening session on the basic sciences and orthopsychiatry Thursday morning, March 6.

A symposium on the future of psychoanalysis in light of advances in biochemistry is scheduled for Friday afternoon.

Among topics to be covered in more than 60 scientific papers are: clinical studies of murder and attitudes toward death; approaches to delinquency; the problem of creativity; schizophrenia in adolescents; approaches to "hard-to-reach" problem families; the training

—Continued on page 188a

IN IMPOTENCE

GLUKOR®

In a recent study[1] coitus was made possible in 85% of 67 cases of impotency with the use of 1 cc. of GLUKOR intramuscularly twice weekly, and maintained once weekly or as little as once monthly. GLUKOR was effective in 88.5% of patients[2] with impotence, male climacteric, senility, depression, angina and coronary.

GLUKOR, *a fortified chorionic gonadotropin, may be used regardless of age and/or pathology without side effects.* GLUKOR *has been found to alleviate symptoms*[2] *of* NERVOUSNESS, FATIGUE, IRRITABILITY, INSOMNIA, DYSPNEA, PALPITATION, *and* LACK *of* ENDURANCE.

Each cc contains:—200 I.U. chorionic gonadotropin (human), 25 mg. thiamine HCL, 52.5 ppm. L (+) glumatic acid, 0.5% chlorobutonal and 1% procaine HCL. Available in 10 & 25 cc multiple dose vials. Reg. U. S. Pat. Off., Pat. Pend. 1957. Copyright.

1. *Gould, W. L.: Impotence, M. Times 84:302 Mar. '56.*
2. *Personal Communications from 110 Physicians.*

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Literature Available

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Also — for the female — GLUTEST . . . effective in refractory cases where other therapy fails.



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PRENATAL CAPSULES LEDERLE

for an active pregnancy

New FILIBON is Lederle's latest development in prenatal supplements . . . designed to supply needed nutritional factors more efficiently and in better tolerated form. Important advantages you'll find in FILIBON include:

New better tolerated source of iron—ferrous fumarate—helps eliminate gastric upset

New non-inhibitory intrinsic factor assures greater B_{12} absorption to meet increased requirements

New more comprehensive formulation includes *phosphorus-free* calcium, Vitamins K and B_6, plus important minerals and trace elements

New Reminder Jar . . . she'll keep it handy on the dining table and remember to take her vitamins

your patients pay no more for the added benefits of FILIBON

Each capsule contains:

Vitamin A	4,000 U. S. P. Units
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Thiamine Mononitrate (B_1)	3 mg.
Pyridoxine (B_6)	1 mg.
Niacinamide	10 mg.
Riboflavin (B_2)	2 mg.
Vitamin B_{12}	2 mcgm.
Ascorbic Acid (C)	50 mg.
Vitamin K (Menadione)	0.5 mg.
Folic Acid	1 mg.
Ferrous Fumarate	90 mg.
Iron (as Fumarate)	30 mg.
Intrinsic Factor	5 mg.
Fluorine (as CaF_2)	0.015 mg.
Copper (as CuO)	0.15 mg.
Iodine (as KI)	0.01 mg.
Potassium (as K_2SO_4)	0.835 mg.
Manganese (as MnO_2)	0.05 mg.
Magnesium (as MgO)	0.15 mg.
Molybdenum (as $Na_2MoO_4 \cdot 2H_2O$)	0.025 mg.
Zinc (as ZnO)	0.085 mg.
Calcium Carbonate	575 mg.

Dosage: one or more capsules daily.

Supplied: attractive, re-usable bottles of 100 capsules.

Lederle

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*Trademark

—Continued from page 186a

of psychotherapists; team treatment of adults in state hospitals; etiology and treatment of anorexia nervosa; community services for children; psychotherapy with children; school mental health programming; special problems of childhood schizophrenia; observational research with emotionally disturbed children; the teacher's role in mental health; integration of psychotherapeutic techniques in rehabilitation and clinical aspects of adult therapy.

Workshop sessions are scheduled on topics including: methodologies for studying healthy behavior; learning disturbances and retardation; State training school programs for delinquent children; the use of newer drugs in child psychiatry; college guidance; the role of vision in ego development of the young child; the consultation function of the child guidance clinic; diagnosis of brain damage; school adjustment of adolescents; mental health epidemiology; runaways from residential treatment centers; use of community authorities in working with delinquent adolescents; factors associated with mental disorders among the aged; and relationship between the problem family and juvenile delinquency.

Showings of mental health films and technical and commercial exhibits related to the field are also scheduled.

Further information is available from Dr. Marion F. Langer, Executive Secretary, American Orthopsychiatric Association, 1790 Broadway, New York 19, New York.

Two Physicians Promoted

Two physicians at New York University College of Medicine have been promoted to the rank of full professor, it was announced recently.

Dr. Claude Edwin Heaton was made professor of obstetrics and gynecology and lecturer in the history of medicine, and Dr. Donald A. Covalt became professor of physical medicine and rehabilitation.

Dr. Heaton received his medical degree from NYU in 1921, followed by his internship and residency in gynecology at Bellevue Hospital. In 1926 he joined the faculty of NYU College of Medicine as an instructor in gynecology. Dr. Heaton, who has written many articles on medical history, has been giving an elective course in the history of medicine since January of 1957. He is historian of the Alumni Association of NYU College of Medicine and a member of the Board of Governors, as well as holding membership in numerous local and national medical and obstetrical societies.

Dr. Covalt joined the faculty of NYU College of Medicine in September of 1947, concurrent with the opening of the department of physical medicine and

—Continued on page 192a

Diagnosis, Please

(Answer from page 33a)

PERFORATED
DUODENAL ULCER

Note barium in part of the biliary tract which communicates with the duodenal bulb.



HELPS PALSIED PATIENTS "LIVE AGAIN"

COGENTIN®

METHANESULFONATE (BENZTROPINE METHANESULFONATE)

rated the best single drug for the palsied patient[1]

- Well tolerated and markedly effective, COGENTIN *"should be added to the treatment program of every patient with paralysis agitans."*[2]
- COGENTIN *gives symptomatic relief* in all types of parkinsonism—whether postencephalitic, idiopathic, or arteriosclerotic.
- COGENTIN *provides highly selective action* such as no other current drug affords.[2] It is often of benefit in rigidity, muscle spasm, even in severe tremor.[3] The contracture of parkinsonism is relieved and posture is improved.[3]
- *With the help of* COGENTIN, *therapy with tranquilizers can often be continued* in patients in whom trembling would otherwise force reduction or withdrawal.[4]

As COGENTIN is long-acting, one dose daily may be sufficient.

Supplied: as 2 mg. quarter-scored tablets in bottles of 100 and 1000.

1. M. Clin. North America 38:485 (March) 1954. 2. J.A.M.A. 162:1031, 1956. 3. J.A.M.A. 156:680, 1954. 4. Yale J. Biol. & Med. 28:308, 1955/56.

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Announcing . . .

a new

orally effective

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for reliable,

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THESE PROBLEMS:

- **resistant infections, especially staphylococcal**

  CYCLAMYCIN — effective in many infections caused by bacteria resistant to erythromycin, the tetracyclines, penicillin, streptomycin; particularly useful against many resistant staphylococci (about 70—75% of erythromycin-resistant staphylococci are susceptible)

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  CYCLAMYCIN — effective in many of the common infections due to gram-positive organisms (staphylococci, streptococci, pneumococci); also against some gram-negative organisms (gonococci, Haemophilus influenzae)

- **untoward reactions**

  CYCLAMYCIN — has not caused serious sensitivity or toxic reactions such as anaphylaxis, micrococcal enteritis, or blood dyscrasias

THESE ADVANTAGES:

- **reliable blood levels** —high, rapid, sustained
- **readily and reliably absorbed** (stable in gastric secretions—no enteric coating to interfere with absorption)
- **well-tolerated**

SUPPLIED:

Capsules, 125 and 250 mg., bottles of 36. Oral Suspension, 125 mg. per 5 cc., bottles of 2 fl. oz. Also available: Oleandomycin Phosphate, Wyeth, for intravenous administration—as a dry powder for reconstitution; each vial contains 500 mg. of oleandomycin base as the phosphate salt.

*CAN BE GIVEN... "WITHOUT HESITATION AS IMMEDIATE THERAPY IN BLEEDING EPISODES..."**



• in epistaxis, otic and ocular hemorrhage, g.i. and rectal bleeding, other forms of spontaneous hemorrhage • before and after T & A, and other surgical procedures.

"PREMARIN" INTRAVENOUS

the physiologic hemostat

increases prothrombin concentration; increases accelerator globulin; decreases antithrombin activity.

FOR PROMPT, SAFE CONTROL

• remission usually obtained in 15 to 30 minutes with a single 20 mg. injection • "No investigator has reported any instance of toxicity or other undesirable side effects."*

"PREMARIN" INTRAVENOUS (conjugated estrogens, equine) is supplied in packages containing one "Secule"® providing 20 mg., and one 5 cc. vial sterile diluent with 0.5% phenol U.S.P.

*Rigg, J.P.: Digest Ophth. & Otolaryng. 20:20 (Nov.) 1957.

Ayerst AYERST LABORATORIES
New York 16, N.Y. • Montreal, Canada

5825

NEWS AND NOTES

—Continued from page 188a

rehabilitation. He is also associate director of the Institute of Physical Medicine and Rehabilitation, a unit of NYU-Bellevue Medical Center, which was opened in 1948.

Dr. Covalt, a native of Muncie, Indiana, received his medical degree from Indiana University in 1933. In 1942, he joined the United States Air Force and became chief of the Convalescent Training Division. With the close of World War II, he was made assistant medical director, medical rehabilitation service, department of medicine and surgery, of the Veterans Administration. Dr. Covalt remained in this post until joining the staff of NYU in 1947. He is currently consultant to ten rehabilitation centers in the United States and one in Canada.

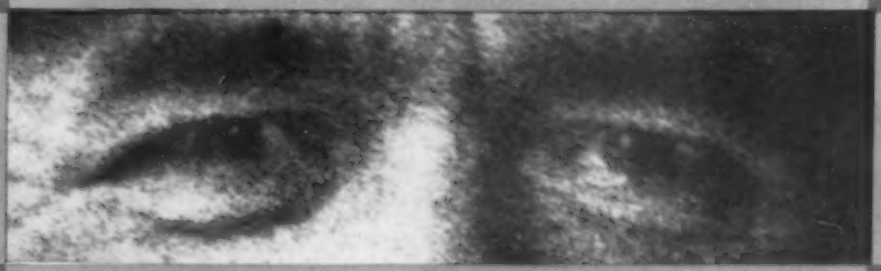
Cincinnati Eye Bank

For approximately one year, an eye bank has been established at the Cincinnati General Hospital, closely associated with the University of Cincinnati Medical School and the Department of Ophthalmology. Since its organization, more than 50 eyes have been donated and about 30 corneal graft operations performed. The purposes of the eye bank are: (1) to establish sources of supply of salvaged eyes, corneal tissue, and vitreous fluid and to provide the means for their collection, preparation, storage, and redistribution to hospitals and surgeons for corneal and retinal detachment operations, (2) to extend and encourage, by teaching and research, the knowledge and skill required

—Continued on page 196a

AN AMES CLINIQUICK

CLINICAL BRIEFS FOR MODERN PRACTICE



what are the 7 "dont's" of office psychotherapy?

(1) Don't argue – let patient "talk out" his troubles. (2) Don't counsel – help him solve his own problems. (3) Don't be hostile – allow patient to express hostility without reciprocating. (4) Don't be unsure – stress significance of normal or abnormal physical findings in relation to symptoms. (5) Don't be too reassuring – overoptimism may suggest you take the symptoms too lightly. (6) Don't approve or censure. (7) Don't be too credulous – patients' words may conceal hidden meanings.

Source – Hyman, M.: Some Aspects of Psychiatry in General Practice, GP *16*:83 (Oct.) 1957.

calmative **NOSTYN®**
Ectylurea, AMES
(2-ethyl-*cis*-crotonylurea)

for tranquil—not "tranquilized" patients

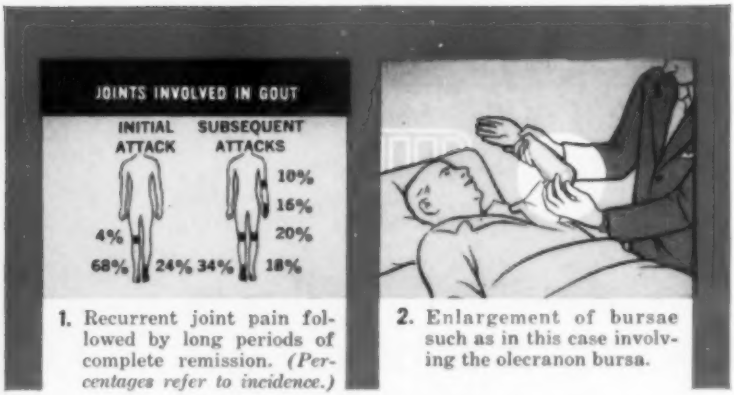
"Anxiety and nervous tension states appeared to be most benefited....The patients experienced and expressed a feeling of greater inward security, serenity....Mental depression, one of the undesirable side actions in many other sedatives, did not develop in any of the patients...."*

*Bauer, H. G.; Seegers, W.; Krawzoff, M., and McGavack, T. H.: A Clinical Evaluation of Ectylurea (NOSTYN®), in press.

dosage: *Children* – 150 mg. (½ tablet) three or four times daily. *Adults* – 150-300 mg. (½ to 1 tablet) three or four times daily.

supplied: 300 mg. scored tablets; bottles of 48 and 500.

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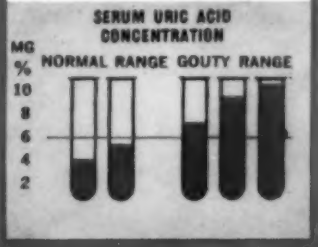


1. Recurrent joint pain followed by long periods of complete remission. *(Percentages refer to incidence.)*

2. Enlargement of bursae such as in this case involving the olecranon bursa.

FROM THESE FINDINGS

3. Elevated serum uric acid levels.



4. Colchicine test: full dose (0.5 mg.) every 1 to 2 hours until pain is relieved or nausea, vomiting or diarrhea occur. The test requires usually 8 to 16 doses. Pain relief is highly indicative of gout.



...SUSPECT GOUT:

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PROBENECID

A SPECIFIC FOR GOUT

Once findings point to gout, long-term management can be started with BENEMID. This effective uricosuric agent has these unique benefits:

- Urinary excretion of uric acid is approximately doubled.
- Serum uric acid levels are reduced.
- Uric acid deposits (tophi) in tissues are mobilized.
- Formation of new tophi can often be prevented.
- Fewer attacks and severity is reduced.

RECOMMENDED DOSAGE: 0.25 Gm. (½ tablet) twice daily for one week followed by 1 Gm. (2 tablets) daily in divided doses.

MSD **MERCK SHARP & DOHME**
DIVISION OF MERCK & CO., Inc., PHILADELPHIA 1, PA.

Benemid is a trade-mark of Merck & Co., Inc.

NEWS AND NOTES

—Continued from page 192a

to perform corneal graft operations, and (3) to carry out research work on eye disease, particularly that resulting from corneal damage, glaucoma, and retinal detachment.

West Virginia University Library

Through the will of the late Dr. T. Jud McBee, West Virginia University has received a bequest of more than $23,000 for the development of the library at the new Medical Center.

Teaching Hospital at West Virginia University

The contract for the construction of the new teaching hospital for the Medical Center at West Virginia University has been executed. The total cost will be $13,172,000, and it is expected that the entire project will be completed by 1960.

Polio Virus Studied at Kansas University

Studies of the invading effect of different strains of polio virus will be continued at Kansas University Medical School under a grant of $104,170 from the National Foundation for Infantile Paralysis. The work will be directed by Dr. H. A. Wenner, Research Professor of Pediatrics.

New Signalling System at Memorial

The New York Community Trust has given $25,000 to the Memorial Center for Cancer and Allied Diseases. This will be used to install a new silent signalling system. A receiver will be car-

—Continued on page 198a



* J.A.M.A. *166*:158,1958; Welsh,A.L. and Ede,M. "*...prompt remissions of...acute phases.*" with TARCORTIN *

1. Clyman, S. G.: Postgrad. Med. *21*:209, 1957.
2. Bleiberg, J.: J. M. Soc. New Jersey *53*:37, 1956.
3. Abrams, B. P., and Shaw, C.: Clin. Med. *3*:839, 1956.
4. Welsh, A. L., and Ede, M.: Ohio State M. J. *50*:937, 1954.
5. Bleiberg, J.: Am. Practitioner *8*:1404, 1957.

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You can take advantage of buccal vascularity for rapid, efficient, thorough absorption of androgen. Metandren Linguets offer the therapeutic equivalent of intramuscular androgen, without painful injections, local reactions, irregular doses or lost working hours.

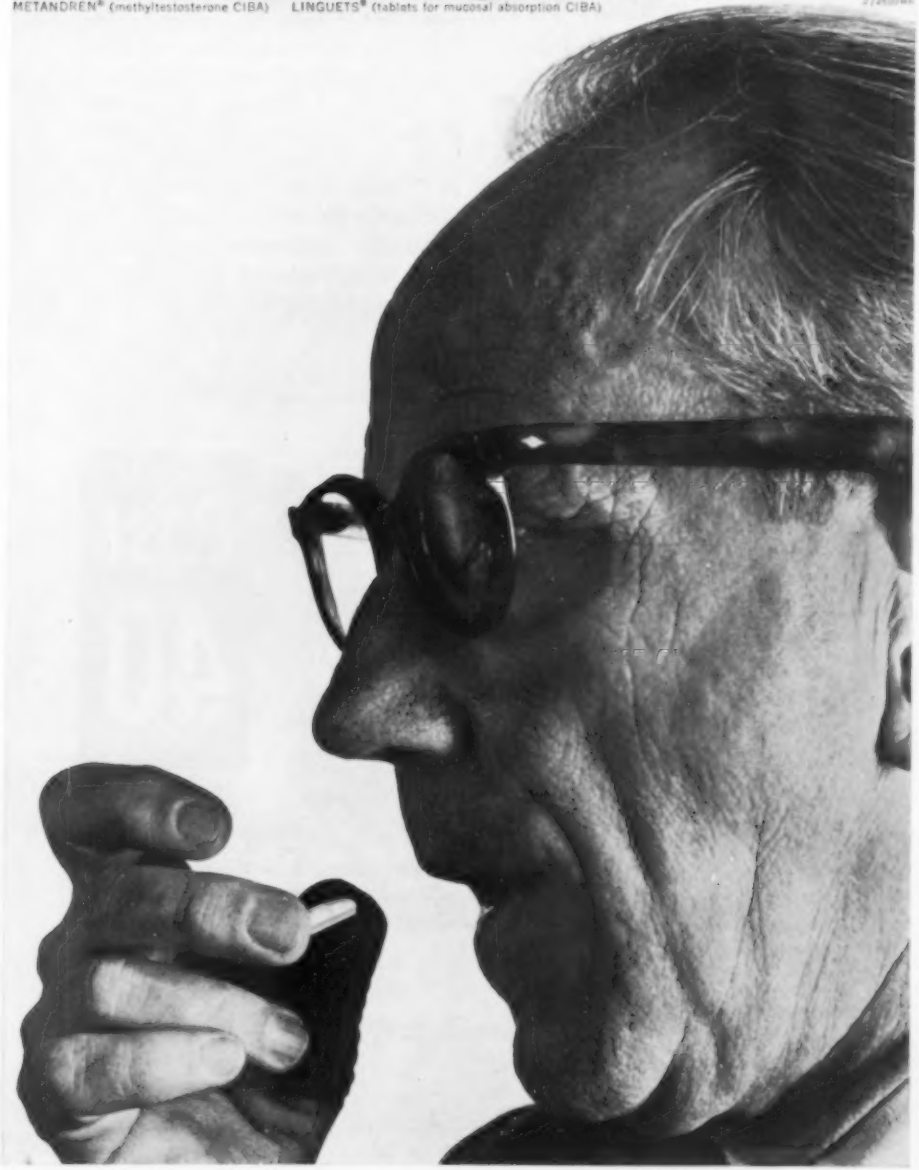
In Males climacteric, impotence, angina pectoris. **In Females** menopause, frigidity, premenstrual tension and dysmenorrhea, functional uterine bleeding. **In Both** for anabolic effects and chronic debility after: severe injury, prolonged illness, major surgery, severe malnutrition, severe infection.

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CIBA SUMMIT, N. J.

METANDREN® (methyltestosterone CIBA) LINGUETS® (tablets for mucosal absorption CIBA)



NEWS AND NOTES

—Continued from page 196a

ried by each member of the hospital staff. A radio impulse will convey a signal heard only by the person to whom it is directed.

Nursing Program at Duke

Duke University has received $238,000 from the Rockefeller Foundation to support a new graduate study program in nursing. This grant will supplement more than $200,000 in Duke University funds allotted for the program, according to Dr. Paul M. Gross, vice-president and dean of the University. The program centers around development of advanced nursing skills at the graduate level to better equip nurses for specialized responsibilities in hospital bedside nursing, for supervisory positions, and for teaching. The grant will extend over a seven-year period.

Appointment of Dr. Lewis Thomas

Dr. Lewis Thomas has been nominated by the Board of Trustees of New York University as Professor and Chairman of the Department of Medicine in the College of Medicine and Director of the Third Medical Division of New York City's Bellevue Hospital Center. Dr. Thomas is well known in his profession for his early recognition of the danger of the indiscriminate use of cortisone in the treatment of infectious diseases, and for his research work in gen-

—Continued on page 200a

In treating the constipated patient **Past 40**

. . . therapy should be directed toward symptomatic relief as well as control of often coexistent biliary disease and faulty absorption. Patients suffering with biliary or hepatic disorders in whom there is a decrease in the flow of bile are generally constipated.

CHOBILE®

Chobile is a logical treatment for biliary constipation. It increases motility of the intestinal tract, helps prevent stool dehydration by maintaining colon water balance. Each Chobile tabule contains 1½ gr. Cholic acid plus 1½ gr. Ketocholanic acids.

Neisler Irwin, Neisler & Co. • Decatur, Illinois

To prevent emotional upsets in cardiovascular conditions

'Compazine', by controlling anxiety and tension, can prevent the emotional upsets that so often play an exacerbating role in cardiovascular conditions. And, 'Compazine' can be depended upon to have little, if any, hypotensive effect.



*Compazine**

the tranquilizing agent remarkable for its freedom from drowsiness and depressing effect

Available: Tablets, Ampuls, Multiple dose vials, Spansule® sustained release capsules, Syrup and Suppositories.

Smith Kline & French Laboratories, Philadelphia

*T.M. Reg. U.S. Pat. Off. for prochlorperazine, S.K.F.

—Continued from page 198a

eral in infectious diseases. He is also widely recognized for his research work in hypersensitivity and allergic reactions. Dr. Thomas was appointed a member of the Board of Health of New York City in January 1957 by Mayor Robert F. Wagner. He is also a member of the Research Council of the Public Health Research Institute of New York, and a consultant to both the Surgeon General, U. S. Army and the Surgeon General of the U. S. Public Health Service.

Dr. Blumgart to go to India

Dr. Herrman L. Blumgart, Professor of Medicine, Harvard Medical School, has been invited by the Rockefeller Foundation to serve as a medical consultant in their educational and clinical program in India. He has been appointed visiting professor of medicine at the University of Lucknow, and will lecture at New Delhi, Agra, and Bombay.

Aging Research at Duke

A $306,922 grant for research on aging has been made to Duke University. This is the first grant in the U. S. Public Health Service's new program designed to encourage establishment of research centers in which many departments of a university, and health and related agencies of a community will cooperate in studying various aspects of aging. The program at Duke University has four main objectives: (1) to develop a center for aging research based upon a university-wide effort; (2) to support fundamental research concerned with health problems of aging and to include relevant research contributions from the social and behavioral sciences and related fields; (3) to train investigators interested in the problems of aging, and (4) to foster a regional resource for the dissemination of scientific knowledge in the field of aging.

Cirrhosis of the Liver

The Metropolitan Life Insurance Company has reported that cirrhosis of the liver now ranks among the ten leading causes of death in the United States. At the ages 45-64, the only diseases which outrank cirrhosis of the liver as a cause of death are heart disease, cancer, and cerebral hemorrhage. In 1956, cirrhosis accounted for approximately 18,000 deaths in the United States, about two-thirds of them among males. Cirrhosis of the liver shows marked geographic variations in its death rate, tending to be highest in the eastern industrial states and California, and lowest in the South and Southwest. More than one-fourth of the deaths are reported to be associated with alcoholism, but the reporting appears incomplete.

Cancer Research at Temple University

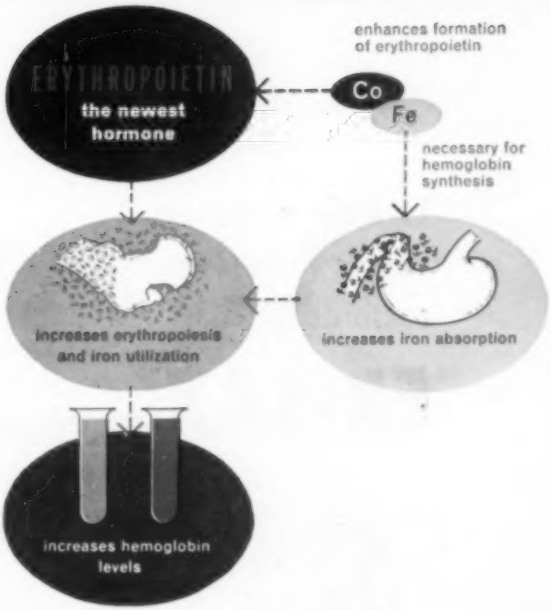
U. S. Public Health Service grants totaling $38,559 have been awarded to members of the faculty of the Temple University School of Medicine, Philadelphia.

Headache to be Studied at Chicago Medical School

A special clinic to be part of the Neurologic Clinic of the Chicago Medical School has been opened at Mt. Sinai Hospital. The possibility of a relation-

—Continued on page 204a

NEW RESEARCH ON ERYTHROPOIETIN EXPLAINS CLINICAL SUPERIORITY OF



RONCOVITE®-mf

(MODIFIED FORMULA)

IN THE COMMON ANEMIAS

Elucidation of the action of erythropoietin—the erythropoietic hormone—provides a clear explanation for the observations of Holly,[1] Ausman,[2] Tevetoglu[3] and many others who have reported that in the common anemias cobalt-iron therapy results in a clinical response superior to that produced by iron alone.

Increased Iron Absorption and Utilization—Recent investigations show that cobalt enhances the formation of erythropoietin.[4,5] This hormone increases the rate of production of new red cells which, in turn, increases the rate of both iron utilization by the marrow and iron absorption from the intestine.[6]

Clinical Application—In simple *iron deficiency anemia*, 89% of patients treated with Roncovite exceeded 12 Gm. of hemoglobin per 100 cc., while only 33% of the same patients treated with iron alone for a comparable period reached this level.[2] In *anemia of pregnancy*, 98.2% of Roncovite-treated patients maintained their hematologic status; 63.8% delivered with a hemoglobin of 13 Gm. per 100 cc. or more.[1] In *anemia of infancy and childhood* an average hemoglobin level of only 8.7 Gm. per 100 cc. was attained with iron alone while the same patients subsequently reached an average hemoglobin level of 11.6 Gm. per 100 cc. with Roncovite.[3]

Roncovite-MF is the new therapeutic agent based on erythropoietin formation which translates this new research into the practical utility of full iron effectiveness with greatly decreased, better tolerated iron dosage.

Each enteric-coated, green tablet contains:

Cobalt chloride, 15 mg.
Ferrous sulfate exsiccated, 100 mg.

Maximum adult dosage:
one tablet after each meal and at bedtime.
Supplied: Bottles of 100 tablets.

Bibliography available on request.

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to help children
toward their normal
regularity

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PALATABLE

EFFECTIVE

WELL-TOLERATED

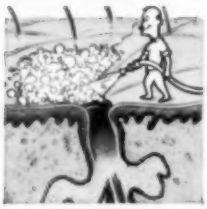


Clinical studies prove that phenolphthalein, the active ingredient of Ex-Lax, is especially suitable for the relief of constipation in children.[1] It acts gently, overnight . . ."in the morning produces a stool very much like normal"[2]. . . continues to act as a "mild aperient for several days,"[3] lessening need for frequent medication. No "adverse effects, such as tissue irritation, toxic symptoms or interference with the normal physiological functions"[4] were observed by isotope research.

1. S. Ditkowsky, F. Steigmann: Phenolphthalein in Childhood. Jour. Ped., Aug. 1954; 45:169.
2. H. Beckman: Treatment in General Practice. W. B. Saunders Co., 1946; p. 478.
3. A. Grollman: Pharmacology and Therapeutics. Lea & Febiger, 1954; p. 391.
4. W. J. Visek, W. C. Liu, I. J. Roth: Studies on the Fate of Carbon-14 Labeled Phenolphthalein. Jour. Pharmacol. and Exp. Therapeutics, July 1956; 117:347.

IN ACNE

Fostex® degreases the skin and helps remove blackheads

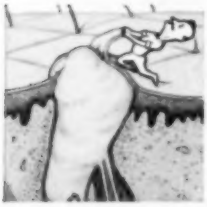


Fostex contains a combination of surface active agents (Sebulytic*) which:

◂ Completely emulsify excess oil so that it is quickly washed off the skin.



◂ Penetrate and soften comedones, unblocking the pores and facilitating removal of sebum plugs.



Fostex dries and peels the skin

◂ The Sebulytic base of Fostex dries and promotes peeling of the skin . . . actions enhanced by the keratolytic effects of micropulverized sulfur and salicylic acid.

*(Sodium lauryl sulfoacetate, sodium alkyl aryl polyether sulfonate, sodium dioctyl sulfosuccinate.)

FOSTEX CREAM for therapeutic washing of skin in the initial phase of acne treatment, when maximum degreasing and peeling are desired.

FOSTEX CAKE for maintenance therapy to keep skin dry and substantially free of comedones.

Fostex is easy for your patients to use

◂ Patients stop using soap on affected skin areas. Instead they use Fostex for therapeutic washing of the skin. The Fostex lather is massaged into the skin for 5 minutes—then rinse and dry.

Write for samples

WESTWOOD *Pharmaceuticals*

Division of Foster-Milburn Co. Buffalo 13, New York

NEWS AND NOTES

—Continued from page 200a

ship between severe and persistent headache and the more severe forms of mental illness will be explored. Patients to the clinic will be referred from other departments of the hospital.

New Haven Hospital Anniversary

Recently, a scientific program was presented as part of a three-day celebration of the fiftieth anniversary of the Hospital of Saint Raphael, New Haven, Connecticut. Professors from several universities presented papers.

Dr. Bertani at Southern California

Dr. Giuseppe Bertani, internationally known for his research in the fields of biology and genetics, has been appointed Associate Professor of Medical Microbiology at the University of Southern California. According to Dr. Brem, Acting Dean, the doctor's research in biology and medicine is opening entirely new fields of knowledge of how the living cell functions.

Effects of Bromides Studied at Albany

From Albany Medical College of Union University comes a report on the use of bromides or of household drugs containing them. These non-prescription drugs, when taken over extended periods, may have the cumulative effect of preventing the body's absorption of vitamins, proteins or other nutrients. An added danger of bromide usage is that these preparations are taken in large doses by persons undergoing some form of tension. This emo-

—Continued on page 206a



"Mrs. Elwell, the obesity patient in 205, wants a laxative."

for the best in tetracycline therapy... new, rapidly effective

COSA-TETRACYN

1. highest, fastest tetracycline blood levels Analysis of a 4-way crossover study confirms that Cosa-Tetracyn produces the highest, fastest blood levels of all available tetracycline enhancement formulations.[1]

2. greatest consistency of high tetracycline blood levels In a 4-way crossover study, Cosa-Tetracyn demonstrated greatest consistency of high blood levels compared to tetracycline-citric acid, tetracycline phosphate complex, and tetracycline-sodium hexametaphosphate.[1]

3. safe, physiologic advantages of glucosamine Completely safe as an enhancement agent, glucosamine is nontoxic, sodium free, nonirritating to the gastrointestinal tract, and there is evidence it may influence favorably the bacterial flora of the intestine.

The most widely prescribed broad-spectrum antibiotic now potentiated with glucosamine, the enhancing agent of choice.

Cosa-Tetracyn is supplied in capsules, 250 mg., bottles of 16 and 100; and half-strength capsules (125 mg.) for long-term therapy or pediatric use, bottles of 25 and 100.

1. Carlozzi, M.: Antibiotic Med. & Clin. Therapy 5:146 (Feb.) 1958.

Pfizer

PFIZER LABORATORIES, Brooklyn 6, N. Y.
Division, Chas. Pfizer & Co., Inc.

GLUCOSAMINE-POTENTIATED TETRACYCLINE

*Trademark

—Continued from page 204a

tional state combined with the anti-nutritional effects of bromides, predisposes these people to serious mental disorders.

Family Clinic Project at Albany Medical College

Albany Medical College of Union University has received a grant from W. K. Kellogg Foundation, Battle Creek, Michigan, to improve and expand its Family Care Clinic, and to provide training and experience for junior instructors in the teaching of comprehensive medical care of families. The grant will be used to support the Clinic for a five-year period.

The College's family care program enables third year students at the College to gain practical experience in preventive medical care by assigning them as family physicians to selected indigent families. The Kellogg Foundation has supported the program since its inception. With the Foundation's latest grant, the College will be able to add six persons to the staff of its family clinic. These people will assist in supervision of the medical students assigned to the program, and, at the same time, will receive training in the teaching of family medical care. Families receiving care at the Clinic are limited to those unable to pay for the services of a private physician. With the increase in staff permitted by the Kellogg grant, it is hoped that eventually the College will be able to increase its facilities for more efficient care of these patients.

Gift to New York University-Bellevue Medical Center

A $100,000 gift from the Lillia Babbitt Hyde Foundation has been made to New York University-Bellevue Medical Center. The money will go toward the five million dollar-for-dollar matching gift from the Samuel H. Kress Foundation and will be used for the construction of a 19-story, 600 bed general hospital to replace the University Hospital. Construction is due to begin January 1959.

Scientists to Study Conditions in African Tribe

Seven members of the faculty of the College of Medical Evangelists will complete a survey, already begun, of 300,000 Waha tribespeople. The base of operations will be located at the north-

—Concluded on page 208a

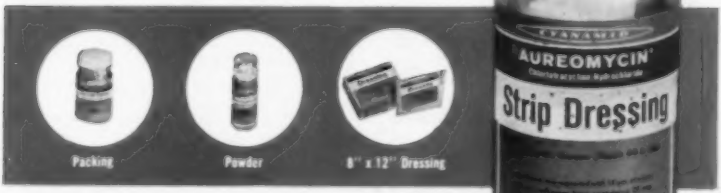


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DRESSINGS

STERILE AUREOMYCIN DRESSINGS in 4 handy forms provide instant-ready added protection against wound infection in hospital, office or emergency use.

STERILE AUREOMYCIN DRESSINGS ensure safe, high-concentration broad-spectrum action at the site of potential or existing infection... promote faster healing and virtually eliminate odor in burns, abscesses, surgical incisions, amputations, and other wounds.





Strip Dressing

AUREOMYCIN Chlortetracycline Impregnated Gauze Products—containing 2% Chlortetracycline Hydrochloride in a special, nonadherent, water-absorbent base—are available as: Strip Dressing, ½" x 72", 2" x 108"; in glass jars. 8" x 12" Dressing, in individual aluminum foil envelopes. Packing, ½" x 24", 1" x 36", and 2" x 36"; in glass jars.

AUREOSURGIC® Surgical Powder—containing 50 mg. Chlortetracycline Hydrochloride per gram in a soluble base—is available in shaker-top bottles of 20 Gm.

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Vim Brand Hypodermic Syringes and Needles
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NEWS AND NOTES

—Concluded from page 206a

ern end of Lake Tanganyika, East Africa. The program is aimed at helping the tribespeople to help themselves in the matter of improving living and health standards. Promising young tribespeople will be trained to carry on the activities as started by the research team.

Bequest at Stanford

The late Charles A. Dore of the Superior Oil Company has left Stanford University approximately $750,000. The bequest is to be divided into two parts—the first for research at the Stamford School of Medicine in the fields of cardiovascular and kidney diseases, and the second to establish the Charles A. Dore Memorial Fund to provide fellowships for the study of these diseases.

Cancer Research at Stanford

Cancer research has multiplied threefold at Stanford University School of Medicine since the formation of a faculty committee to encourage it four years ago. Funds for cancer studies from all sources have increased from $222,000 to $604,000 in three years. The six-men group was formed primarily to administer a renewable Institutional grant for $50,000 yearly from the American Cancer Society. The committee can parcel out funds in any amount to any investigator, including those without any established reputation in research. The research growth shown, it is believed, is due largely to the stimulation of additional cancer research by younger members of the faculty.

Commonwealth Fund Grant to North Carolina

The Social Research Section of the Division of Health Affairs of the University of North Carolina School of Medicine has received a grant of $28,000 from the Commonwealth Fund. The award is for the continued support of the program of social research and training in health and the health professions being carried on by the Social Research Section under the direction of Dr. Henry L. Smith. This training in social science and service in the health field is part of the students' graduate degree work.

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The LOGICAL TREATMENT For ACNE

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WHO IS THIS DOCTOR?

(from page 59a)

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. . . ready for action

SPARINE should always be on hand for the patient in psychic crisis. In the medical emergency, it relieves acute apprehension and modifies the patient's response to pain. In overactivity or aggressiveness, SPARINE rapidly calms the patient and encourages cooperative behavior. To simplify the management of these difficult patients, always carry SPARINE.

SPARINE provides prompt control by intravenous injection, effective maintenance by both the intramuscular and oral routes, and is well-tolerated in all three methods of administration. SPARINE does not cause liver damage, parkinsonian-like syndrome; only rarely have blood dyscrasias or seizures been reported.



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Promazine Hydrochloride

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EQUANIL® Meprobamate

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A Wyeth normotropic drug for nearly every patient under stress

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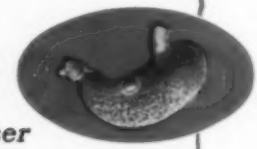
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EFFECTIVE CONTROL OF HYPERMOTILITY. Each patient has wide physiological and emotional tolerances to anticholinergics. Malcotran's wide dosage latitude facilitates regulation of your patient's dosage *according to his need, not his tolerance.*

Malcotran assures prompt arrest of gastro-intestinal motility – and reduction of gastric secretion.



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for peptic ulcer

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78

MAY DO BETTER IF YOU ADD

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Nutritional supplementation may not be necessary for those who come to you for school certificates or ingrown toenails. But the great majority – about 75% – of all patients need your help in meeting the increased metabolic demands of illness. Give them VITERRA, the comprehensive supplement of vitamins and minerals. See how much better they will do.

*average of patients and indications seen in general practice. Source: independent research organization; name on request.

Each VITERRA capsule contains:

Vitamins	
Vitamin A (Palmitate)	5,000 U.S.P. Units
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Vitamin B_{12} U.S.P.	1 mcg.
Thiamin Hydrochloride U.S.P.	3 mg.
Riboflavin U.S.P.	3 mg.
Pyridoxine Hydrochloride U.S.P.	0.5 mg.
Niacinamide U.S.P.	25 mg.
Ascorbic Acid U.S.P.	50 mg.
Calcium Pantothenate	5 mg.
Vitamin E (from mixed tocopherols concentrate)	3.7 I.U.
Minerals	
Calcium (from Dicalcium Phosphate)	213 mg.
Cobalt (from Cobaltous Sulfate)	0.1 mg.
Copper (from Cupric Sulfate)	1 mg.
Iodine (from Potassium Iodide)	0.15 mg.
Iron (from Ferrous Sulfate)	10 mg.
Manganese (from Manganous Sulfate)	1 mg.
Magnesium (from Magnesium Sulfate)	6 mg.
Molybdenum (from Sodium Molybdate)	0.2 mg.
Phosphorus (from Dicalcium Phosphate)	165 mg.
Potassium (from Potassium Sulfate)	5 mg.
Zinc (from Zinc Sulfate)	1.2 mg.

Dosage: usually one capsule daily.

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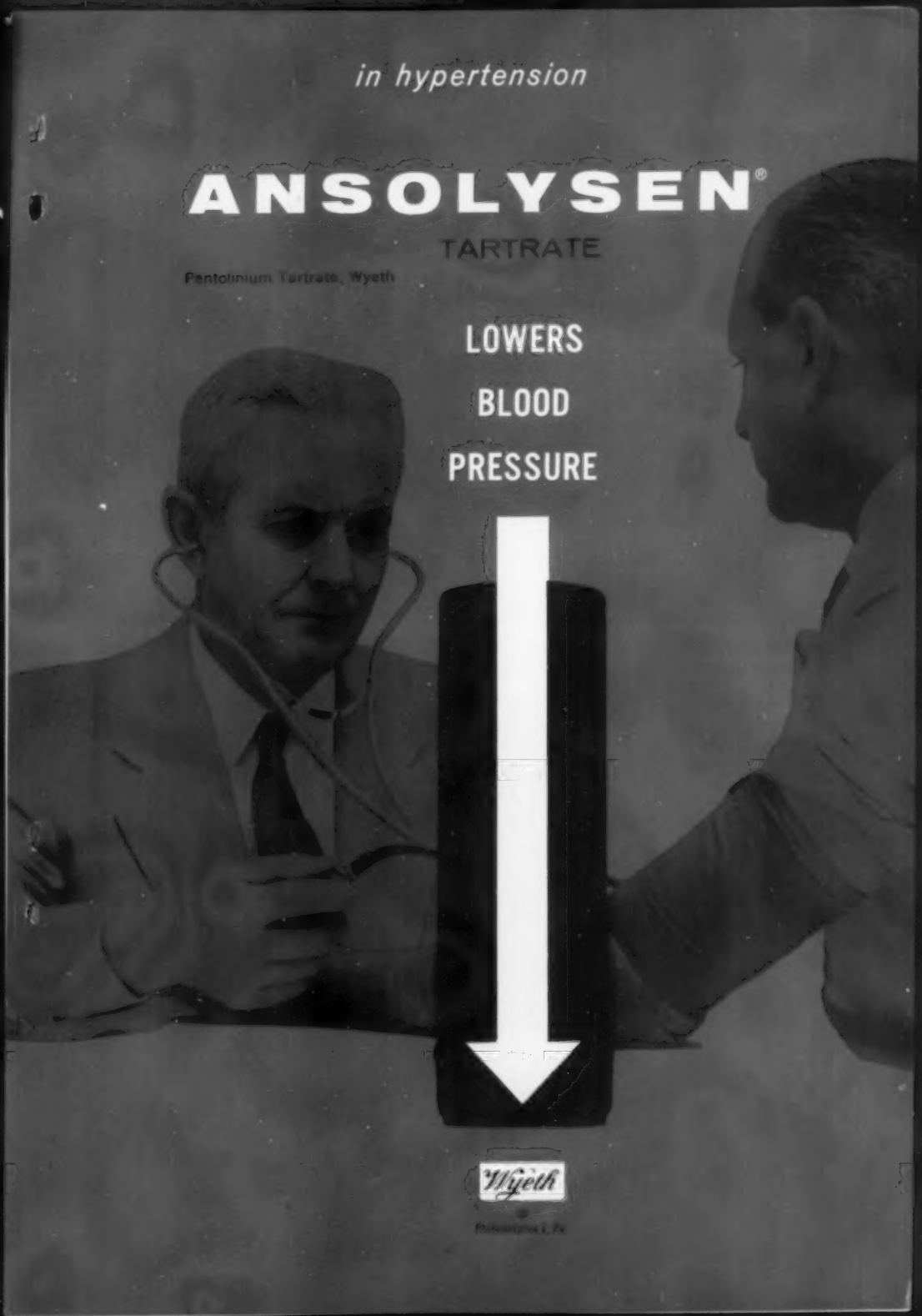
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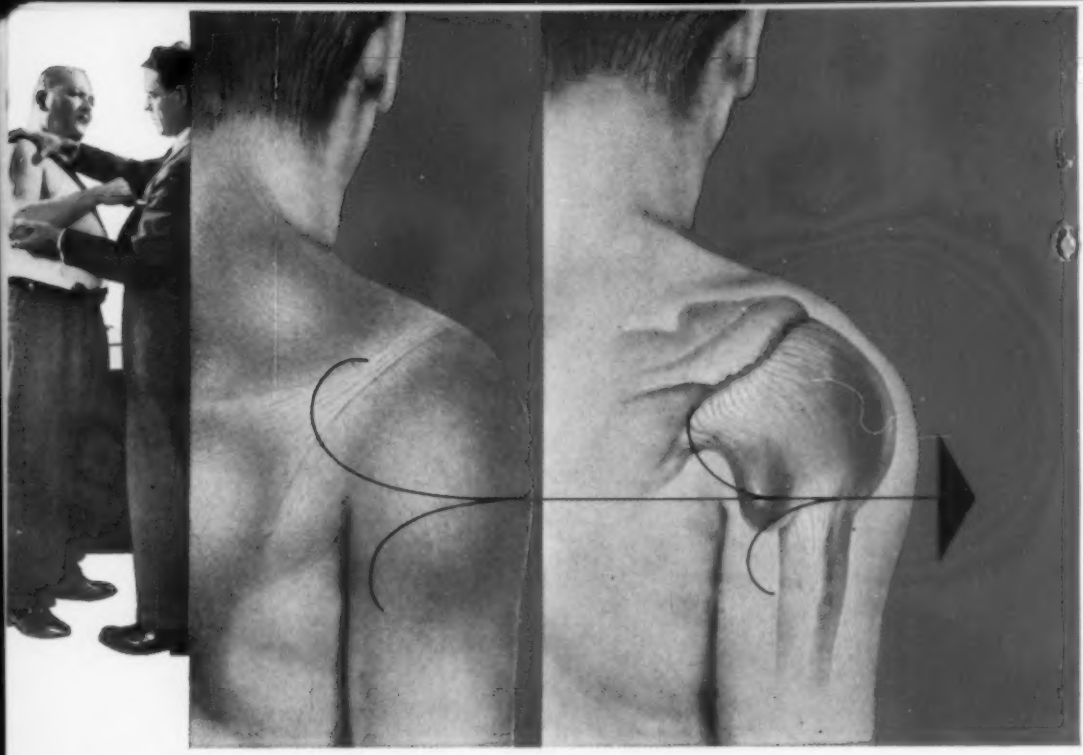
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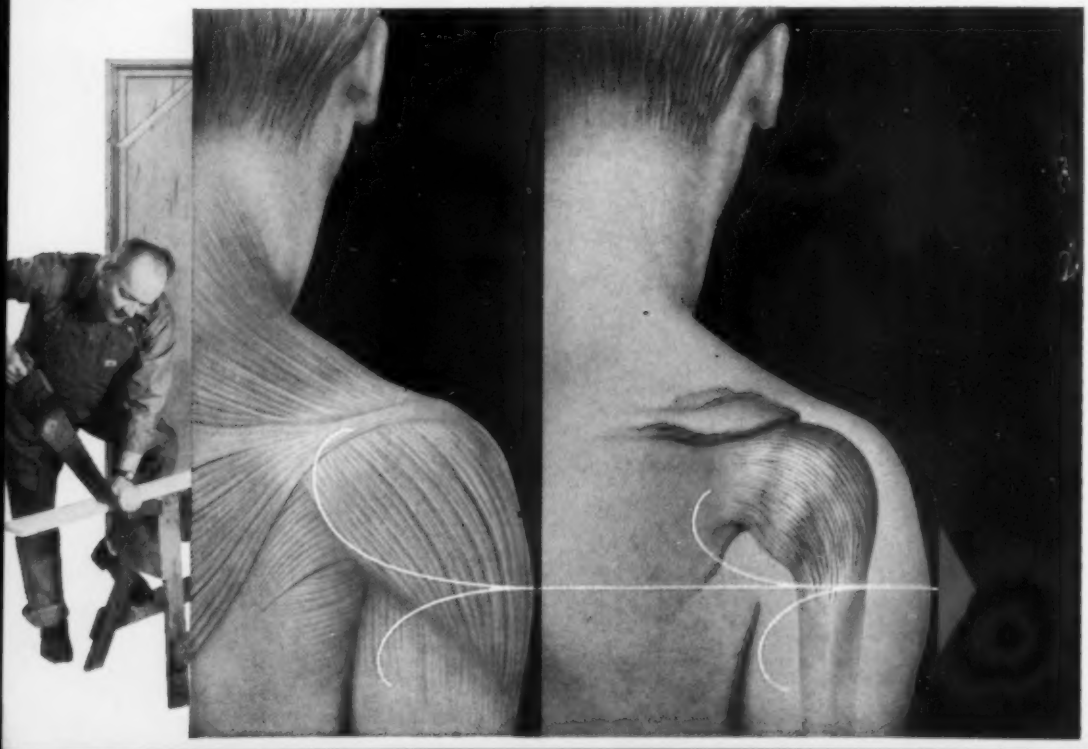
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rheumatoid arthritis involves both joints and muscles

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1. Comroe's Arthritis: Hollander, J. L., p. 149 (Fifth Edition, Lea & Febiger, Philadelphia, Pa. 1953). 2. Merck Manual: Lyght, C. E., p. 1102 (Ninth Edition, Merck & Co., Inc., Rahway, N. J. 1956).

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meprobamate to relieve muscle spasm
prednisolone to suppress inflammation

relieves both muscle spasm and joint inflammation

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a new drug that...

has been clinically tested in
over 4900 cases of overweight

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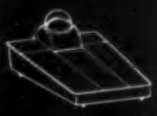
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acts specifically on
the hunger syndrome



can be given at
8 p.m. or later without
interfering with sleep



produces an average
weight loss of
2-2½ lbs. per week ‡

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by more than 700 physicians in over 4900 cases of overweight in selected University Hospitals and Clinics as well as in private practice.[2]

not a CNS stimulant . . .

unlike *d*-amphetamine, LEVONOR is not a central nervous system stimulant, but is an *anorexigenic specific* that does not cause "jitters," tenseness, or nervousness. Can be given after dinner... AT 8 P.M. OR LATER... to allay night-time hunger without disturbing sleep.[3]

safe . . .

"5 times safer (LD/50) than *d*-amphetamine"[4]... strikingly free of side-effects.

effective . . .

produces an average weight loss of 2-2½ lbs. per week.

suggested dosage schedule . . .

clinicians have found LEVONOR particularly well suited to a dosage schedule of one tablet three times a day... at 11 a.m., 4 p.m., and 8 p.m. Some patients, especially those who have previously been treated with *d*-amphetamine, may require a temporary initial dosage of two tablets three times a day. LEVONOR offers the lattitude necessary to adjust dosage to the needs of individual patients.

available . . .

in bottles of 100 tablets, each tablet containing 5 mg. of 1-phenyl-2-aminopropane alginate.

1. Sc. Exhibit, A.M.A. Meeting, Dec. 2-6, 1957.
2. Sc. Exhibit, Mich. State Med. Meeting, Sept. 25-27, 1957.
3. Gadek, R. J.: Report 912:1957.
4. Sc. Exhibit, N. Y. State Med. Meeting, Feb. 18-21, 1957.

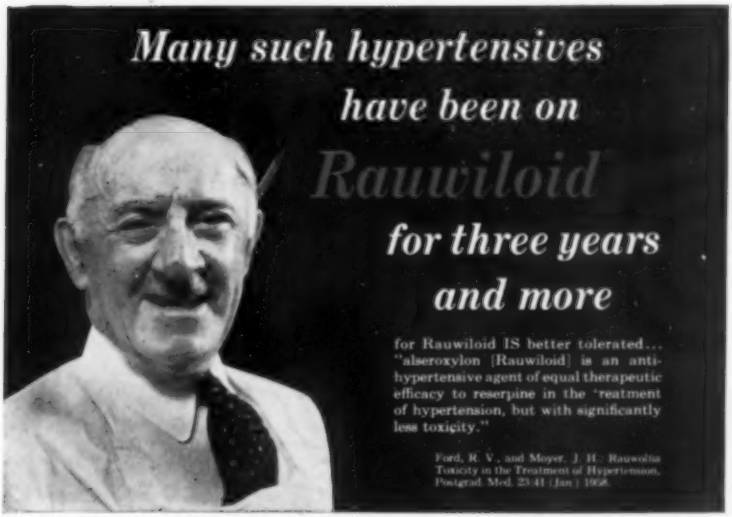
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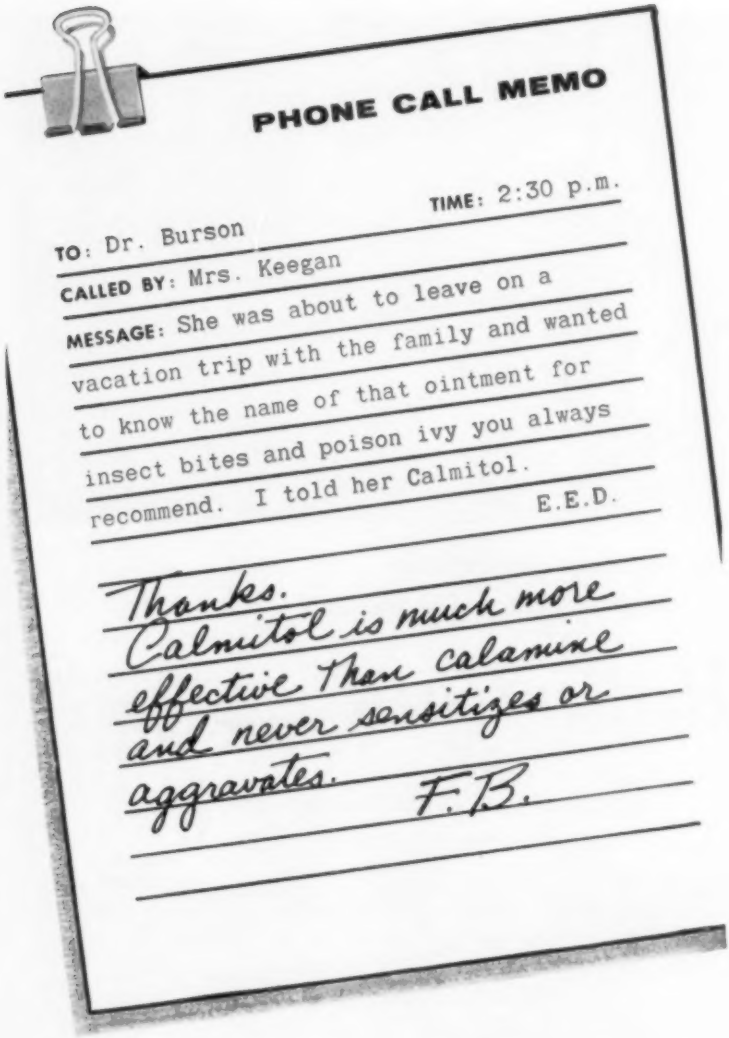
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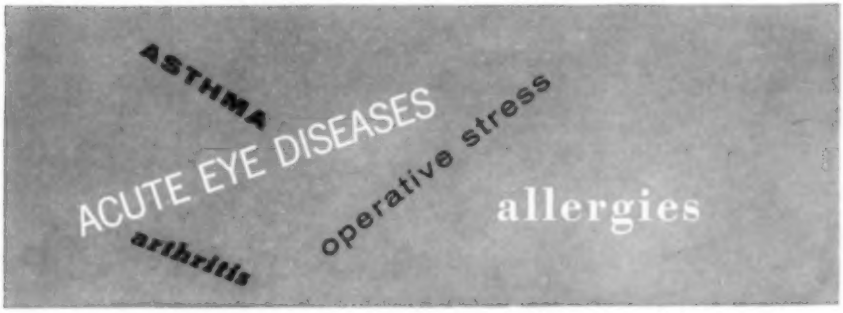
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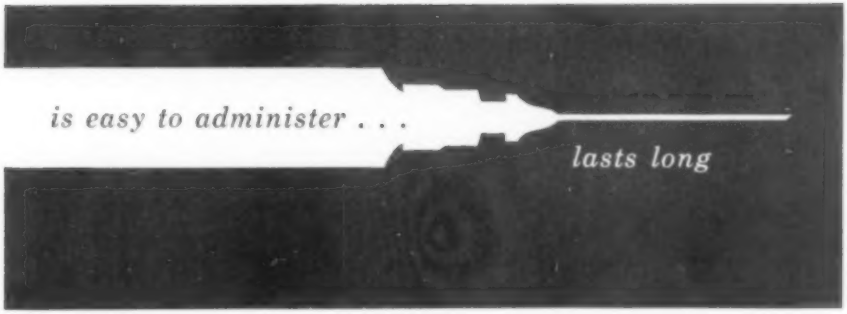


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